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Why Student Financial Aid?

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ABSTRACT

This paper develops the public policy justification for needs-tested higher educational subsidies targeted specifically to students. Traditionally, public subsidies for students have been directed to institutions. However, in the mid-1960s federal and state governments began to subsidize the higher education of students directly through needs-tested grants and other forms of aid. Currently more than $20 billion is spent on student aid. This paper describes student demand for higher education, illustrates differential abilities of families to finance college attendance costs, summarizes econometric studies of price and aid impacts on student enrollment behavior, reviews the history of federal and state commitments to student aid programs, and concludes by identifying two public interest motives for support of student aid programs.

WHY STUDENT FINANCIAL AID?

Thomas G. Mortenson

Introduction

Why do we spend more than $20 billion on student financial aid each year in the United States (College Board, 1987)? For that matter, what is financial aid? Do students and their families need this aid to attend college? What interest does society have in providing financial aid to students? Where has this commitment come from?

We actually spend a great deal more than $20 billion per year to educate students in our colleges and universities. The larger public investment occurs through direct institutional subsidies. These subsidies reduce the price paid by students to a fraction of the total costs of education. The data on higher educational finance for 1984-85 indicate that about $61.9 billion was spent by higher educational institutions on student education. This includes expenditures for instruction, libraries and other academic support, student services, institutional overhead, and physical plant operations and maintenance. However, only $21.3 billion of the total educational expenditure was covered by tuition revenues. The remaining $40.6 billion, or 66% of the expenditure, was also student financial assistance. Taxpayers, donors and others paid these educational costs for students. The percentage of costs of education covered by tuition revenues in 1984-85 averaged 21% in public institutions and 61% in private institutions. The remaining 79% in public institutions and 39% in private institutions was a form of financial assistance to students not as apparent as charges for tuition, books, food, housing, and transportation that must be paid out of pocket (National Center for Education Statistics).

This paper explains why some portion of our annual investment in the higher education of young people is allocated to students directly through financial aid programs rather than through the traditional institutional subsidies. The public policy approach taken here is primarily economic: that is, this paper examines the issue of public resource allocation to achieve higher educational enrollment objectives efficiently, effectively, and equitably.

The thesis of this paper--that financial aid is important to both students and society--is developed in five parts. First, the economic theory of student demand for higher education is presented. Second, the costs of higher education are related to student and family ability to finance them. Third, the results of empirical studies on impact of price on student enrollment behavior are summarized. Fourth, federal and state policies that address the effects of price on student enrollment behavior are described. Finally, two public interest rationales for student financial aid--one economic and the other social--are offered.

Student Demand for Higher Education

Economists view higher educational enrollments as the result of the intersecting curves of student demand and higher educational capacity. That is, the enrollment of students--for the country, for a state, for an institution, for a program, or even for a specific course--is the combined result of student interest and ability to enroll and the supply of enrollment spaces provided in colleges. Observed enrollment numbers cannot exceed the limiting factor in this demand/capacity relationship.

The capacity of higher education to accommodate student enrollments has expanded greatly since World War II, particularly through state construction of higher educational facilities and increased appropriations for the delivery of educational services. During the past 35 years, the number of public higher educational institutions has increased from 641 to 1,329, and the number of private institutions from 1,210 to 1,817. During this same period, educational and general expenditures of these institutions increased from $1.7 billion to $72.3 billion. Higher education enrollments, reflecting the growth in student demand and higher educational capacity of institutions, increased from 2.7 million to over 12 million during the same period (Grant & Snyder, 1986).

This growth in enrollments is driven by student demand for higher education. The economic investment theory of student demand for collegiate education holds that the prospective college student will enroll in higher education if the present value of the future benefits resulting from college education, plus current consumption benefits, exceeds the present value of the costs faced by the individual compared to possible alternative investments. In essence, an individual will attempt to enroll in college if he or she expects a favorable return on the investment.

The Cooperative Institutional Research Program (CIRP) survey of college freshmen provides a useful test of the economic theory of student demand for higher education. The CIRP survey has been conducted nationally for more than two decades to gather data on first time, full time American college freshmen. The surveys report on the reasons college freshmen give for their decision to attend college. Table 1 compares the main reasons given for attending college by freshmen in 1976 and 1986 (Astin, et al., 1976, 1986).

TABLE 1

Reasons Given by College Freshmen for Attending College 1976-1986

1986 Rank	Reasons for Attending College	Percent Very Important 1976	1986	Change 76-86
1.	Get a better job	71.0%	83.1%	+12.1%
2.	Learn more about things	72.9	74.1	+ 1.2
3.	Make more money	53.8	70.6	+16.8
4.	Gain general education	64.0	61.6	- 2.4
5.	Prepare for graduate school	43.9	47.1	+ 3.2
6.	Improve reading/study skills	35.1	40.3	+ 5.2
7.	Become more cultured person	32.8	32.2	- .6

During the last ten years, most reasons for attending college appear to have changed little in relative importance. However, the two reasons most clearly related to the economic value of college--"make more money" and "get a better job"--stand out by the large increases in their importance relative to the other factors. In general, the responses provided by students in the CIRP survey support the economic theory of student demand for higher education.

In an important sense, these college students appear to reflect labor market conditions. Since World War II the dollar return on a college investment has been very favorable relative to lesser educational attainment levels. In particular, the return has improved greatly during the 1980s. As Table 2 shows, real incomes for families headed by people who have attended college are increasing while incomes of families headed by persons with lesser educational attainment are declining (Census Bureau, annual).

TABLE 2

Median Family Income by Educational Attainment of Family Head (Constant 1986 Dollars)

Educational Attainment	Median Family Income 1956	1975	1980	1986	Change 80-86
Less Than 8 Years Elementary	$12,315	$15,126	$14,410	$14,101	- 2.1%
8 Years Elementary	17,056	20,218	18,770	18,515	- 1.4
1 to 3 Years High School	19,480	23,322	21,547	20,119	- 6.6
4 Years High School	22,004	29,998	29,049	28,716	- 1.1
1 to 3 Years College	23,972	33,766	33,066	34,205	+ 3.4
4 Years College	DNA	42,033	41,035	45,603	+11.1
5 Years or More College	DNA	47,189	46,197	52,670	+14.0

Differences in Abilities to Pay College Costs

To obtain the benefits of higher education, students incur costs. These costs are of three types: direct, indirect, and opportunity. Direct costs are those expenses that occur only through college attendance, such as tuition, fees, books and supplies. Indirect costs are living costs while in college; these include food, housing, transportation, and personal and medical care. Opportunity costs are the costs associated with the alternative use of one's resources, such as income forgone while attending college, and other uses of one's money, such as better housing or a newer car. Risk is an additional consideration the student faces: what are his or her chances of gaining the future rewards of a college education while these various costs are accumulating?

This section examines the issue of direct and indirect costs that students must deal with in attending college. For the following discussion, the basis for determining a student's need for financial aid is:

College Budget: Tuition and fees
+ Books and Supplies
+ Living expenses while attending college

Family Contribution: - Parent's contribution
- Student's contribution

= Financial need

Note that in student financial aid only the costs tied to direct and indirect college attendance are considered in evaluating student need. Neither risk nor opportunity costs of college attendance are ordinarily addressed through financial aid, despite their obvious implications for student enrollment behavior and student aid program costs (e.g., loan defaults).

Data on college budgets, supplied by colleges and universities participating in ACT's Student Need Analysis Services, provide useful average cost measures for students attending different types of public and private institutions. These data for 1986-87 are shown in Table 3 (ACT).

TABLE 3

National Average College Budgets by Level and Control of Institution and Dependent/Independent Student Status 1986-87

Average College Budgets	Public 2-Year		Public 4-Year		Private 4-Year	
	D	I	D	I	D	I
Tuition and Fees	$ 716	$ 716	$ 1298	$ 1298	$ 4928	$ 4928
Books and Supplies	338	338	354	354	349	349
Direct Costs	1054	1054	1652	1652	5277	5277
Living Costs	2781	4315	3406	4300	3456	4139
Total Costs	$ 3835	$ 5369	$ 5058	$ 5952	$ 8733	$ 9416

(D = Dependent; I = Independent)

The variation in tuition and fee direct costs is attributable to control and level of institution, while the variation in living costs is attributable to where the student lives.

Students and their families differ in their abilities to finance the direct and indirect costs incurred by attending college. This variable ability is largely related to family income: families may use savings from prior income, make payments from current income, or they may borrow against future income. But family ability to finance college is also related to age of parents, assets, family size, number of children enrolled in college, and other demands on family resources.

The Uniform Methodology (UM) provides a widely used guideline for determining a standardized expectation for each family to contribute toward their student's direct and indirect college attendance costs. This formula considers many family circumstances, including income and assets, size and number of children enrolled in college. The UM produces a standardized expectation for each family to contribute a certain dollar amount toward the education of their son or daughter based on their particular set of circumstances.

Until recently, the student and his or her family could choose to finance this Uniform Methodology family contribution expectation out of current, past or future income. The reduced financial aid resources available to finance need since 1980, however, have altered this picture. Now, under the new Congressional Methodology (CM) effective for the 1988-89 academic/award year, Guaranteed Student Loans (CSL) will be used in addition to and not as a substitute for the expected family contribution. Students and families that still need to borrow to meet the expected family contribution will face higher borrowing costs through more expensive Supplemental Loans for Students (SLS) and Parent Loans for Undergraduate Students (PLUS).

The data in Table 4 illustrate the relationship between family income and average expected parental, student, and family contribution that resulted from application of the Uniform Methodology to financial aid applicants in 1986-87. The table was prepared for the U.S. Department of Education from an analysis of a random sample of 78,000 dependent undergraduate ACT financial aid filers for that year (ACT, 1986).

TABLE 4

Parent's Income and Expected Family Contributions Under the Uniform Methodology of Needs Analysis 1986-87 Dependent Undergraduate ACT Filers

	Mean Expected Contribution		
Parents' Income*	Parent	Student**	Family
$0-2,999	$ 183	$ 928	$1,111
$3,000-5,999	87	917	1,004
$6,000-8,999	50	912	962
$9,000-11,999	152	906	1,058
$12,000-14,999	240	893	1,133
$15,000-17,999	401	903	1,304
$18,000-20,999	679	901	1,580
$21,000-23,999	1,028	892	1,920
$24,000-26,999	1,409	904	2,313
$27,000-29,999	1,879	902	2,799
$30,000-32,999	2,353	914	3,267
$33,000-35,999	2,969	924	3,893
$36,000-38,999	3,667	940	4,607
$39,000-41,999	4,334	952	5,286
$42,000-44,999	4,985	1,026	6,011
$45,000 & over	8,754	1,116	9,870

* Taxable and nontaxable income.

** Student's contribution includes $700 to $900 expectation from summer savings, whether earned or not.

The ACT data on college costs and family contributions may be usefully combined to illustrate through what family income levels financial aid is important. Table 5 shows the family income levels required to finance direct and indirect college costs through Uniform Methodology expected family contributions (ACT, 1986; Census Bureau annual). Table 5 also shows the proportion of American families with children under 18 in 1985 with sufficient family income to finance these costs out of current cash flow based on the Uniform Methodology's expected contribution.

Census Bureau surveys of family income for families with school age children provide a useful measure of the proportion of children that would require financial aid to finance the college costs shown in Table 3. Using 1984 family income data, about 71% of all children would require financial aid to be able to attend a public 2-year college--the least costly option. Seventy-nine percent of all children would require aid to attend a public university. Ninety-two percent would require financial aid to attend an average cost private 4-year college.

TABLE 5
Average Family Incomes Required to Finance
Average Dependent Undergraduate College Budgets by Institutional Type
1985-86

	Public 2-Year	Public 4-Year	Private 4-Year
Average College Budgets	$3,835	$5,058	$8,733
Required Family Contribution	$3,835	$5,058	$8,733
Corresponding Parental Income	$38,500	$45,000	$64,500
Percent of Families That Earn This Much or More That Have Children	29%	21%	8%

Table 6 offers another illustration of the distribution of children in families by family income (ACT, 1986; and Census Bureau, annual). This table shows the number of children age 0 to 17 who live in families that will require financial aid to be able to pay direct and indirect college attendance costs.

TABLE 6

Distribution of Children by Family Income Compared to Family Income Required to Finance College Budgets 1986-87 College Budgets, 1985 Family Incomes

```
==============================================================================
                              Total Family
                              Money Income
                                  /|\
                                   |+
                                   |X
                                   |X
                      $100,000 ____|X
                                   |X
                                   |X
                                   |X
                                   |X
                                   |X
                                   |XX
                                   |XX
                                   |XX
                                   |XX
                       $75,000 ____|XX
                                   |XX
                                   |XXX
                                   |XXX
                                   |XXXXX
Priv 4 Year College Cost --------->|XXXXXXX
                       $60,000 ____|XXXXXXXX
                                   |XXXXXXXXX      X=100,000 children
                                   |XXXXXXXXX        under 18 years of age
                                   |XXXXXXXXXX
                       $50,000 ____|XXXXXXXXXX
                                   |XXXXXXXXXXXX
                                   |XXXXXXXXXXXXXX
Public 4 Year College Cost ------->|XXXXXXXXXXXXXXXXX
                       $40,000 ____|XXXXXXXXXXXXXXXXXXX
Public 2 Year College Cost ------->|XXXXXXXXXXXXXXXXXXXX
                                   |XXXXXXXXXXXXXXXXXXXXXXXXXX
                                   |XXXXXXXXXXXXXXXXXXXXXXXX
                       $30,000 ____|XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
                                   |XXXXXXXXXXXXXXXXXXXXXXXXXXX
                                   |XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
                                   |XXXXXXXXXXXXXXXXXXXXXXXXXXX
                       $20,000 ____|XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
                                   |XXXXXXXXXXXXXXXXXXXXXXXXXXX
                                   |XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
                                   |XXXXXXXXXXXXXXXXXXXXXXXXXXX
                       $10,000 ____|XXXXXXXXXXXXXXXXXXXXXXXXXXXX
                                   |XXXXXXXXXXXXXXXXXXXXXXXXX
                                   |XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
                                   |XXXXXXXXXXXXXXXXXXXXXXXXX
                                   |XXXXXXXXXXXXXXX
  ---------------------------------0-----------------------------------
         College Costs                        Number of Children
------------------------------------------------------------------------------
```

The Effect of Price on Student Enrollment Decisions

The effects of price on college student enrollment decisions have been studied for more than two decades. These studies have been based on a wide variety of data, places, periods of time, and methods of analysis.

This section presents first the results of these econometric studies on student enrollment decisions of access and choice. The results of the studies have been taken primarily from a recent review of this literature by Leslie and Brinkman. The second section examines the less studied question of the effect of student financial aid on price-influenced student enrollment behavior.

Student Enrollment Response to Price

Leslie and Brinkman examined about 25 empirical studies of the effects of price on enrollment (1987). The studies, published between 1967 and 1982, used data collected largely between 1959 and 1972 prior to the introduction of the Basic Educational Opportunity Grant Program. Results were presented separately for price impact on aggregate demand (access) and institutional demand (choice). The authors have made a major contribution to understanding this literature through their efforts to standardize findings so that results can be compared.

To compare the measured effects of price on student enrollment behavior across studies, Leslie and Brinkman selected the student price response coefficient (SPRC) from a variety of alternative possible measures. The SPRC is the change in college participation rates among 18-24-year-olds as a result of a $100 higher education price change. They recalculated the results of the 25 student demand studies to correct for different definitions of the higher education market population. Dollar values from all studies were converted to their purchasing power during the 1982-83 academic year. The major findings from the Leslie and Brinkman analysis follow.

First, in all 25 studies increased price of higher education led to decreased enrollments, or decreased prices led to increased enrollments. In all cases, the effect of increased price on aggregate demand for higher education was negative. In direction of effect, the results are consistent.

The second conclusion of the Leslie-Brinkman analysis is that a "$100 tuition price increase appears to be associated with a .6 percentage point decline in the 18-24-year-old participation rate and an enrollment decline of 1.8 percent, ceteris paribus." That is, a real price increase, not offset by financial aid and occurring across all higher education institutions, would yield an enrollment decline of 1.8 percent of the 18-24-year-old population. SPRCs ranged from .2 to 2.4, with a mean of .7 and a mode of .6. Through an examination of the details of each of the studies used in their study, the authors explained the extreme SPRCs reported in the literature, and settled on an SPRC of .6 as the most likely aggregate effect on general populations of 18-24-year olds. Moreover, the studies using national data samples and exercising greatest controls over nonprice influences had the most consistent SPRC results of around .6.

Third, the effects of a $100 price change varied not only in sign but in magnitude by the direction of the change. The enrollment increase effects of a $100 tuition decrease were greater than the enrollment decrease effects of a $100 tuition increase.

Fourth, students at 2-year colleges tended to be more responsive to price than are students overall. The Wisconsin tuition experiment demonstrated this most directly, although controls were relatively weak in this study. Other studies, however, report similar effects. In addition, students in private institutions appear to be the least affected by a $100 tuition increase. Leslie and Brinkman suggest that these effects occur because students in 2-year colleges tend to be poorer and older, and several studies report that these kinds of students are most responsive to price. For students in private institutions, change in price has less effect on enrollment. Leslie and Brinkman suggest that this occurs because students in private institutions tend to be more affluent, and a $100 tuition change is relatively smaller than it would be at a lower cost institution.

Fifth, Leslie and Brinkman found that student enrollment behavior appears to be affected more by tuition price changes than by changes in other attendance costs, such as dormitory room and board charges in studies that included this factor. A more recent study by Manski and Wise, however, finds a different result: direct and indirect costs influence student enrollment behavior equally (1983).

Finally, change in tuition at a single institution would have about three times the enrollment effect at that institution that it would have if applied to all competitive institutions.

The meta-analytical approach used by Leslie and Brinkman unfortunately masks the effects of price on different segments of the potential higher educational population. Further study of the empirical literature reviewed by Leslie and Brinkman, and also of more recently published studies, is necessary to fully understand these effects.

Student Enrollment Response to Financial Aid

Several studies of the effect of price on college student enrollment behavior have extended the study of direct and indirect student charges to net charges or the specific effect of financial aid on student enrollment behavior. These studies present less consistent findings on the effect of financial aid than do those reviewed by Leslie and Brinkman regarding gross price effects mentioned above.

First, financial aid consistently affects student enrollment behavior in the expected direction. However, nearly all of the studies examined by the authors were based on data that preceded the Education Amendments of 1972 when the federal funding and programs were greatly expanded. Thus, those results may be somewhat dated with respect to more recent experience.

Second, Leslie and Brinkman report that "in all cases reviewed, save one, the award of aid had a lesser effect than a tuition change of the same value." Typical of these studies is Jackson's 1978 study that considered the effects of student aid. Jackson concluded that "the mere awarding of aid is far more significant than the amount of aid ..."

However, a 1983 study by Manski and Wise, which appeared after the Leslie-Brinkman meta-analysis was complete, found a different result. When schooling costs were specified in dollars per month divided by family income, financial aid and tuition prices had similar effects on student enrollment behavior.

Third, research results on generally representative populations show that grants have a greater impact on student enrollment decisions than do other forms of student financial aid. The most extensive review of this literature, by Carlson indicated that students from the lowest family incomes experienced greater enrollment response to grants than did students from higher income levels, and these lowest income students also were about twice as responsive to grants as they were to loans and work-study. Middle income students, however, appeared to be more responsive to loans than they were to either grants or work-study assistance (1974).

The studies summarized above have not been reviewed recently from the perspective of financial aid impacts of different types on different kinds of students--an important aspect of the packaging question. Such a study remains to be done and would be most helpful in current public policy considerations of college savings plans, income contingent loans, substitutability of loans for grants for minorities, and assumable levels of student loan indebtedness.

The Public Policy Commitment to Equalize Higher Educational Opportunity

The federal government--and to varying but lesser degrees state governments as well--recognize the differential abilities of students and their families to finance higher educational attendance costs. This recognition takes the form of public policy reflected in financial aid programs targeted at students who apply for and demonstrate financial need to pay their college attendance costs.

Federal Government

Since 1972, the federal government's major policy objective in the finance of higher education has been to equalize educational opportunity for students through needs tested grants. The federal policy of student support is based on a view of student choice as the best guide to institutional responsiveness to the public interest. This became the federal policy with the adoption of the 1972 Education Amendments to the Higher Education Act of 1965. This policy is also enforced through civil rights statutes that prevent discrimination against many classes of citizens. Gladieux and Wolanin, in their political history of the 1972 Amendments to the Higher Education Act of 1965 (1976), concluded the following:

> One theme above all dominates the law and the legislative history. The equalization of opportunities for higher education, a goal historically more incidental than integral to federal involvement in this field, clearly became the central commitment of the federal higher education policy with the passage of the Educational Amendments of 1972.

> As an abstraction, equal opportunity is implicit throughout the bill - in the provisions for community colleges and occupational education, in the state planning provisions, in the institutional aid formula. But operationally, its principal meaning was that lack of money should not be a barrier to an individual's pursuit of education or training beyond high school. Thus the equal opportunity theme is most directly expressed in the student aid provisions, which form the centerpiece of the legislation. Removing the financial barriers facing students was the overriding concern of the legislators, as it had been of the Carnegie Commission and the Rivlin Report.
>
> The law embraces a set of new and old student assistance programs designed to ensure equal access to the postsecondary system and to go far toward ensuring equality of choice among institutions ....
>
> Corollary to the equal opportunity theme, the law enunciates the basic policy choice that students, not institutions, are the first priority in federal support for higher education. The legislators were concerned about institutional well-being and survival, particularly of private schools, but they determined that these concerns should not be the basis of federal policy. Better, they decided, to put purchasing power in the hands of needy students and let the students make their own choices in the marketplace of postsecondary education. This strategy would have the effect of concentrating available federal resources on the students who might otherwise be barred from postsecondary opportunities; it would also, so the reasoning went, serve to make institutions more responsive to the needs and interests of such students.

State Governments

The states have assumed notably different responsibilities from the federal government in the provision of higher educational opportunity. The supply or capacity of higher educational opportunity has been the responsibility of the states--at least since the Morrill Land-Grant College Act of 1862. As student demand for higher education increased, state resources were heavily committed to the expansion of capacity of institutions.

The states fulfilled their obligation to provide spaces for students by expanding existing higher educational institutions and creating new ones. Concurrently but separately, the states expanded their operational subsidies as well. This latter subsidy was directed toward institutions--not students--and had the effect of reducing the price public institutions charged their students to something well below the costs of providing educational services. For 1983-84, tuition revenues in public institutions covered about 18 to 25% of educational costs--depending on level and type of public institution (National Center for Education Statistics).

The states have allocated small but increasing portions of their higher educational funding (Chronicle, 1986) to student financial aid (Reeher & Davis, 1986). The following tables show trends and differences in state funds devoted to student financial aid programs.

TABLE 7

Total State Appropriations for Higher Education and Student Grant Aid 1969-70 to 1986-87 (Dollars in millions)

Year	State Appropriations Higher Education	State Appropriations Financial Aid	Percent for Financial Aid
69-70	$6,201.8	$ 199.9	3.2%
74-75	11,074.8	440.8	4.0
79-80	19,143.1	864.5	4.5
84-85	28,003.6	1,411.4	5.0
85-86	30,747.2	1,523.7	5.0
86-87	32,377.1	1,721.7	5.3

TABLE 8
State Appropriations for Higher Education and Student Grant Aid, 1986-87
(Dollars in thousands)

Rank	State	State Appropriations Higher Education	State Appropriations Financial Aid	Percent for Financial Aid
1	Vermont	$ 46,778	$ 8,437	18.04%
2	New York	2,720,779	457,551	16.82
3	Illinois	1,390,614	147,434	10.60
4	Massachusetts	816,379	83,919	10.28
5	Pennsylvania	1,108,982	104,148	9.39
6	Minnesota	747,187	62,346	8.34
7	New Jersey	898,577	69,711	7.76
8	Rhode Island	117,149	8,412	7.18
9	Iowa	404,610	26,148	6.46
10	Indiana	660,532	41,052	6.21
11	Ohio	1,208,210	72,847	6.03
12	Michigan	1,228,559	71,366	5.81
13	Connecticut	368,648	19,128	5.19
14	Oklahoma	385,552	19,795	5.13
15	Wisconsin	666,525	32,408	4.86
16	Colorado	423,132	19,261	4.55
17	North Carolina	1,172,120	44,950	3.83
18	West Virginia	241,087	8,871	3.68
19	Texas	2,141,392	78,556	3.67
20	Utah	257,249	9,135	3.55
21	South Carolina	520,248	17,796	3.42
22	Oregon	335,998	10,729	3.19
23	California	4,562,651	134,625	2.95
24	Florida	1,277,704	35,516	2.78
25	Kentucky	468,955	12,233	2.61
26	Georgia	714,004	18,537	2.60
27	New Hampshire	55,961	1,423	2.54
28	Tennessee	608,083	13,787	2.27
29	Missouri	476,420	10,291	2.16
30	Virginia	901,452	19,133	2.12
31	Arkansas	273,182	5,703	2.09
32	Alabama	556,894	9,936	1.78
33	Washington	609,937	10,665	1.75
34	Maryland	569,975	9,856	1.73
35	Maine	125,216	2,132	1.70
36	Kansas	350,735	5,430	1.55
37	Delaware	96,797	1,321	1.36
38	Hawaii	220,845	2,597	1.18
39	Alaska	207,086	2,075	1.00
40	South Dakota	73,223	620	.85
41	Mississippi	327,353	2,055	.63
41	New Mexico	233,552	1,461	.63
43	North Dakota	124,430	748	.60
44	Arizona	480,076	2,475	.52
45	Nebraska	217,355	1,093	.50
46	Idaho	126,030	610	.48
47	Louisiana	541,722	2,295	.42
48	Nevada	102,419	414	.40
49	Montana	103,167	401	.39
50	Wyoming	111,583	240	.22
	TOTALS	$32,377,114	$1,721,672	5.32%

Society's Interest in Improving Educational Opportunity

There are two general public interest reasons why society supports student financial aid and the access to higher educational opportunities that aid provides. These reasons, which differ from the student demand factors reviewed earlier in this paper, pertain to society's interest in renewing the human capital of the labor force and to preserving social stability.

Labor Force Renewal

As economic systems evolve, human capital plays an increasingly important role in the generation of wealth and prosperity. Human capital refers to the productive potential of the labor force, in particular the mental and physical potential of individuals to perform socially valuable labor. Clearly, individuals without skills or knowledge that are valuable to employers are less productive than individuals who have them. Similarly, individuals limited by poor health cannot be as valuable to employers as are individuals who are normally healthy.

The economic prosperity of society is derived differently at different stages of economic development. These stages differ in their reliance on human capital. In the primary stage of economic development, wealth is generated through exploitation of natural resources: agriculture, mining, forestry, and commercial fisheries are examples. In secondary economic development, wealth is generated by the return on physical capital investments: manufacturing typically produces wealth at this stage. In tertiary economic development, wealth is produced by human capital, and that productive potential is dependent on the development of the physical and intellectual potential of the labor force.

In the United States, manufacturing replaced agriculture as the dominant form of economic activity in the nineteenth century. In the twentieth century, manufacturing, in turn, has been replaced by intensive economic activity tied to human resources. Since the end of World War II, the parts of the economy that have expanded are those most heavily dependent on healthy, highly educated manpower. This trend appear to be accelerating in the 1980s.

In the dynamic processes of economic evolution, the productivity of the labor force is dependent upon its continuous renewal. Under the inevitable progression of time, the labor force ages. Some workers retire, or die, or can no longer find a place to work. Others are added where openings occur, either through vacancy or creation of new jobs.

Currently, the wealth-generating capacity of our labor force is being tested by two changes occurring in the nation's demography. First, the declining birthrate since the late 1950s will eventually produce a smaller pool of potential labor force members. This decline in the numbers of people available for the work force has already been factored into long-range economic forecasts for the American economy. We will be poorer as a country first because there will be fewer potential workers available to produce wealth.

In addition to this virtually certain quantitative deterioration in our human capital stock, we also face a potential qualitative loss. Gradually, the better educated white majority of the labor force is being replaced by less well educated minorities. These minorities--especially blacks, Hispanics and American Indians--do not currently have the human capital investments to replace, one for one, the aging white majority. The substitution of lesser capitalized workers for better capitalized workers will result in declining labor force productivity during a period of economic development increasingly dependent on a well capitalized labor force.

TABLE 9

Distribution of U.S. Population by Age and Race/Ethnicity 1985

Age Range	White	Black	Hispanic	Other
0 to 4	71.1%	15.0%	10.0%	3.9%
5 to 9	70.8	15.4	10.2	3.6
10 to 14	71.3	15.5	9.6	3.6
15 to 19	73.5	14.9	8.4	3.2
20 to 24	75.0	13.6	8.3	3.1
25 to 29	76.4	12.7	7.7	3.2
30 to 34	77.7	11.9	6.9	3.5
35 to 39	79.5	10.7	6.5	3.3
40 to 44	79.5	10.3	7.0	3.2
45 to 49	79.7	10.8	6.5	3.0
50 to 54	81.4	10.5	5.5	2.6
55 to 59	82.9	9.7	5.2	2.2
60 to 64	85.1	8.9	4.1	1.9
65 & over	87.3	8.2	2.9	1.6

Thus, while the labor force requires both quantitative and qualitative enhancements to ensure the continued prosperity of the United States, the human capital base is deteriorating in both dimensions. The U.S. can do little now about the quantitative loss of human capital; it still takes several decades to produce a member of the labor force (unless the immigration doors are opened wider). But public policy can improve the productive potential of the labor force by improving the physical and intellectual capital of the available population.

Put most directly, unless public policy addresses the extraordinary human capitalization requirements imposed by these demographic trends, we will be poorer as a nation than we would have been had we better capitalized the available human resources.

Preservation of Social Peace Through Hope

Student financial aid is a social program, created in response to a social problem deemed worthy of governmental attention. Social programs, as such, emerge at times and in places and ways that reflect conditions that are unsatisfactory with respect to a collectively defined standard. To the extent that Americans view their system as a land of opportunity for the talented and ambitious, the era of civil rights agitation in the 1950s and 1960s revealed conditions for many American citizens that were well short of that ideal. In response, President Kennedy proposed an aggressive series of social programs that later, under President Johnson, became known as the War on Poverty (Eidenberg & Morey, 1969). These programs were designed to redress the difference between those ideals and the reality of identified conditions.

The War on Poverty was a platform of social policy directed toward the reduction of poverty in the United States. The platform consisted of three planks: the improvement in the human capital of the poor, through programs of health and education, to make the poor more valuable to potential employers in the labor force; the elimination of irrelevant discriminatory barriers to jobs in the labor force through civil rights legislation; and the stimulation of the economy to create more jobs so that when the better capitalized poor were prepared to enter the labor force, the jobs would be there.

The planks of the platform of the War on Poverty became public policy through the enactment of legislation. During a relatively brief period in the mid-1960s, the War on Poverty became operational through the enactment of such pieces of legislation as the Civil Rights Act of 1964 and the Elementary and Secondary Education Act and the Higher Education Act of 1965. Equality of opportunity became a central policy theme evident in the social legislation of the period.

The Higher Education Act inaugurated the federal government's commitment to needs-tested student financial aid. This Act recharted the federal involvement in student aid programs. Previously, aid had been targeted on veterans of military service, or to encourage the study of certain subjects deemed to be important to the nation. Now, however, grants were to be directed toward expansion of higher education specifically for financially needy students.

The 1965 Higher Education Act, and its subsequent amendments and reauthorizations currently in law, must be recalled and considered in the context of the conditions of inequality that produced first social unrest, then the proposals for changes in social policy, and finally the enactments of legislation that charted the policy course that constituted the political response to the original condition. The following evaluation of the equity aims is considered in this light.

Since 1970, the demographic, economic and political processes that create and distribute wealth have produced widening disparity between the affluent and the poor. The growth in this disparity is shown in Table 10. Since 1970 the number of families below 75% and above 125% of the median family income has increased. As a result, the proportion of families in the 75 to 125 percent-of-median range--a frequently used measure of middle income--has dropped from 32.8% in 1970 to 26.4% today.

TABLE 10

Distribution of U.S. Families by Incomes
1950-1986

Family Income	1950	1955	1960	1965	1970	1975	1980	1985	1986
Below 75% of median	33.6%	34.7%	34.3%	33.7%	33.5%	34.5%	35.2%	35.7%	36.2%
75% to 125% of median	28.5	29.5	30.3	30.9	32.8	29.1	28.0	26.6	26.4
Above 125% of median	37.9	35.8	35.4	35.4	33.7	36.4	36.8	37.7	37.4

Table 11 adds sharper focus to the poverty problem in the U.S. (Census Bureau, annual). This table reflects the distribution of poverty among individuals and children by racial/ethnic category over the last 25 years. Poverty is clearly a greater problem among blacks and Hispanics than it is among whites. It is also more a problem for children than it is for adults, regardless of race.

TABLE 11

U.S. Population and Children in Poverty by Race/Ethnic Categories
1959-1986

	1959	1965	1970	1975	1980	1984	1986
Individuals							
Below poverty line (millions)	39.5	33.2	25.4	25.9	29.3	33.7	32.4
Whites in poverty	18.1%	13.3%	9.9%	9.7%	10.2%	11.5%	11.0%
Blacks in poverty	55.1	41.8*	33.5	31.3	32.5	33.8	31.1
Hispanics in poverty				26.9	25.7	28.4	27.3
Children							
All children in poverty	26.9%	20.7%	14.9%	16.8%	17.9%	21.0%	19.8%
White children in poverty	20.6	14.4	10.5	12.5	13.4	16.1	15.3
Black children in poverty	65.5	50.6*	41.5	41.4	42.1	46.2	42.7
Hispanic children in poverty				33.1	33.0	38.7	37.1

*1966 data

Finally, with respect to the equity objective of student financial aid, some assessment of the status of equity of higher educational opportunity will help reveal problems that remain to be addressed. The equity issue, which has been a part of the public policy debate in higher education during the last two decades, has focused primarily on the status of higher educational access for two groups--women and minorities.

During the years from 1959 through 1969, the rate at which women entered college following high school averaged 14% lower than for men. Between 1970 and 1975, however, this access gap rapidly closed. Over the next 11 years, women high school graduates enrolled in college at rates roughly identical to those for men (Cohany, annual). Equity of higher educational opportunity had been achieved. The data in Table 12 generally support this conclusion. (It should be noted that for the last four years, especially in the 1986 data, Table 12 also shows deteriation in the participation of women high school graduation in college compared to men. Because of the sampling process by which these data were collected, neither the explanation nor the statistical significance of this development is yet clear.)

TABLE 12

College Entrance Rates for Recent High School Graduates by Gender 1959-1986 (Numbers in thousands)

Year	Total High School Graduates Men	Total High School Graduates Women	Total High School Graduates Total	Number Enrolled in College Men	Number Enrolled in College Women	Number Enrolled in College Total	College Entrance Rates Men	College Entrance Rates Women	College Entrance Rates Total	Women Difference from Men
1959	664	791	1,455	360	305	665	54.2%	38.6%	45.7%	-15.6%
1960	756	923	1,679	408	350	758	54.0	37.9	45.1	-16.1
1961	790	973	1,763	445	402	847	56.3	41.3	48.0	-15.0
1962	872	966	1,838	480	420	900	55.0	43.5	49.0	-11.5
1963	794	947	1,741	415	369	784	52.3	39.0	45.0	-13.3
1964	997	1,148	2,145	570	467	1,037	57.2	40.7	48.3	-16.5
1965	1,254	1,405	2,659	718	636	1,354	57.3	45.3	50.9	-12.0
1966	1,207	1,405	2,612	709	600	1,309	58.7	42.7	50.1	-16.0
1967	1,142	1,383	2,525	658	653	1,311	57.6	47.2	51.9	-10.4
1968	1,184	1,422	2,606	748	696	1,444	63.2	48.9	55.4	-14.3
1969	1,352	1,490	2,842	812	704	1,516	60.1	47.2	53.3	-12.9
1970	1,343	1,414	2,757	741	686	1,427	55.2	48.5	51.8	-6.7
1971	1,369	1,503	2,872	788	747	1,535	57.6	49.7	53.4	-7.9
1972	1,420	1,541	2,961	749	708	1,457	52.7	45.9	49.2	-6.8
1973	1,458	1,601	3,059	730	695	1,425	50.1	43.4	46.6	-6.7
1974	1,491	1,610	3,101	736	738	1,474	49.4	45.8	47.5	-3.6
1975	1,513	1,673	3,186	796	819	1,615	52.6	49.0	50.7	-3.6
1976	1,450	1,537	2,987	685	773	1,458	47.2	50.3	48.8	3.1
1977	1,482	1,658	3,140	773	817	1,590	52.2	49.3	50.6	-2.9
1978	1,485	1,676	3,161	758	826	1,584	51.0	49.3	50.1	-1.7
1979	1,474	1,686	3,160	743	816	1,559	50.4	48.4	49.3	-2.0
1980	1,500	1,589	3,089	701	823	1,524	46.7	51.8	49.3	5.1
1981	1,490	1,563	3,053	816	830	1,646	54.8	53.1	53.9	-1.7
1982	1,508	1,592	3,100	739	829	1,568	49.0	52.1	50.6	3.1
1983	1,390	1,574	2,964	721	841	1,562	51.9	53.4	52.7	1.5
1984	1,429	1,583	3,012	800	862	1,662	56.0	54.5	55.2	-1.5
1985	1,286	1,380	2,666	754	785	1,539	58.6	56.9	57.7	-1.7
1986	1,331	1,455	2,786	744	755	1,499	55.9	51.9	53.8	-4.0

The success of women in achieving and sustaining parity in access to higher education contrasts sharply with the experience of racial/ethnic minorities during the same period. As Table 13 shows, during the 1960s the nonwhite college entrance rate for recent high school graduates averaged about 13% below the rate for whites. This gap closed rapidly during the first half of the 1970s, and was effectively closed during the second half of the 1970s. By 1980, however, the access gap was reappearing. For the 4-year period from 1983 to 1986, the difference between the white and nonwhite college entrance rates for recent high school graduates was actually somewhat greater--13.6%--than it had been during the 1960s. Table 13 also shows that the access gap is somewhat greater for blacks than for Hispanics (Cohany, annual).

TABLE 13

College Entrance Rates for Recent High School Graduates by Race/Ethnicity 1960-1986 (Numbers in thousands)

	Total High School Graduates					Number Enrolled in College					College Entrance Rates					Non-W Less White
Year	White	Non-White	Black	Hisp	Total	White	Non-White	Black	Hisp	Total	White	Non-White	Black	Hisp	Total	
1960	1,565	114			1,679	717	41			758	45.8%	36.0%			45.1	- 9.8%
1961	1,612	151			1,763	798	49			847	49.5	32.5			48.0	-17.0
1962	1,660	178			1,838	840	60			900	50.6	33.7			49.0	-16.9
1963	1,615	126			1,741	736	48			784	45.6	38.1			45.0	- 7.5
1964	1,964	181			2,145	967	70			1,037	49.2	38.7			48.3	-10.5
1965	2,417	242			2,659	1,249	105			1,354	51.7	43.4			50.9	- 8.3
1966	2,403	209			2,612	1,243	66			1,309	51.7	31.6			50.1	-20.1
1967	2,267	258			2,525	1,202	108			1,311	53.0	41.9			51.9	-11.1
1968	2,303	303			2,606	1,304	140			1,444	56.6	46.2			55.4	-10.4
1969	2,538	304			2,842	1,402	114			1,516	55.2	37.5			53.3	-17.7
1970	2,461	296			2,757	1,280	142			1,422	52.0	48.0			51.6	- 4.0
1971	2,596	276			2,872	1,402	130			1,532	54.0	47.1			53.3	- 6.9
1972	2,614	347			2,961	1,292	165			1,457	49.4	47.6			49.2	- 1.8
1973	2,707	352			3,059	1,302	123			1,425	48.1	34.9			46.6	-13.2
1974	2,736	367			3,101	1,288	187			1,475	47.1	51.0			47.5	+ 3.9
1975	2,825	366			3,191	1,446	167			1,613	51.2	45.6			50.5	- 5.6
1976	2,640	347	320	152	2,987	1,291	167	134	80	1,458	48.9	48.1	41.9	52.6	48.9	- .8
1977	2,768	372	335	156	3,140	1,403	187	166	80	1,590	50.7	50.3	49.6	51.3	50.6	- .4
1978	2,750	411	352	133	3,161	1,378	206	161	57	1,584	50.1	50.1	45.7	42.9	50.1	0
1979	2,776	384	324	154	3,160	1,376	183	147	69	1,559	49.6	47.7	45.4	44.8	49.3	- 1.9
1980	2,682	407	361	129	3,089	1,339	185	151	68	1,524	49.9	45.5	41.8	52.7	49.3	- 4.4
1981	2,626	427	359	146	3,053	1,434	212	154	76	1,646	54.6	49.6	42.9	52.1	53.9	- 5.0
1982	2,644	456	384	174	3,100	1,376	192	140	75	1,568	52.0	42.1	36.5	43.1	50.6	- 9.9
1983	2,496	468	392	138	2,964	1,372	190	151	75	1,562	55.0	40.6	38.5	54.3	52.7	-14.4
1984	2,514	498	438	185	3,012	1,455	207	176	82	1,662	57.9	41.6	40.2	44.3	55.2	-16.3
1985	2,241	425	333	141	2,666	1,332	207	141	72	1,539	59.4	48.7	42.3	51.1	57.7	-10.7
1986	2,307	479	386	169	2,786	1,292	207	141	75	1,499	56.0	43.2	36.5	44.4	53.8	-12.8

Conclusion

The reasons why student financial aid exists may be self-evident to some and unclear to others. This paper has offered evidence to support the argument that financial aid is a worthwhile use of public monies.

More than $20 billion are spent on financial aid programs for students each year. Additionally, more than $40 billion are spent to subsidize their educations through subsidies to the colleges where they are enrolled. We do so because we view higher education as a socially necessary activity. The result is the enrollment of about 12 million Americans in our public and private colleges and universities.

Evidence presented in this paper supports the view that higher education is essential to current and future prosperity of both individuals and the larger society. The signals from the labor market tell us our labor force is currently oversupplied with workers who have less than a college education, and undersupplied by workers who have college degrees. The imbalance between the needs of the labor force and economy, and the performance of the higher educational system in meeting these needs appears to be getting worse in the mid-1980s.

Student financial aid, as viewed since 1965, addresses simultaneously two social issues. The first is fulfillment of the aspirations of citizens who wish to climb the ladder of opportunity, view higher education as their means to that advancement, and require assistance to help finance the costs of college enrollment. Needs-tested subsidies directed to students were chosen by Congress in the 1972 Amendments to the Higher Education Act of 1965 as the most efficient means of fulfilling these aspirations. The second issue is the extraordinary human capitalization requirements of the evolving world economy and the role of the United States in that system. The demographics of the U. S. population show a gradual replacement of better capitalized whites by less well capitalized minorities. At the same time, the labor market indicates that unsatisfied demand exists mainly for college educated workers. This unsatisfied labor market need must be increasingly met through the higher education of individuals who are dependent on financial aid to be able to attend college.

Available evidence suggests that financial aid as presently designed and funded has failed to meet these social issues during the 1980s. The achievements of the 1970s have been largely lost during the 1980s. Once again, as in 1965 and 1972, it is the right time to ask: Why Student Financial Aid?

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Pell Grant Program Changes and Their Effects on Applicant Eligibility 1973-74 to 1988-89

Thomas G. Mortenson

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PELL GRANT PROGRAM CHANGES AND THEIR EFFECTS ON APPLICANT ELIGIBILITY
1973-74 TO 1988-89

Thomas G. Mortenson

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ABSTRACT

This paper examines the effects of changes in the design of the Pell Grant Program on applicant eligibility over the 16 years between 1973-74 and 1988-89. The primary measure of these effects is the purchasing power of the Pell Grant for financial aid applicants relative to the college attendance costs they face. The eligibility for Pell Grants is determined for representative dependent and independent cases at three kinds of higher educational institutions. This eligibility is compared to the actual college attendance costs faced by students attending these colleges. The paper then identifies the design components of the Pell Grant Program that have been changed in ways that alter applicant eligibility for Grants, and explores their implications.

The paper concludes that during the sixteen year life span of the Pell Grant Program, Congress has shifted the focus of Pell Grants away from lowest resource aid applicants toward applicants from more middle income backgrounds, and that this shifting focus will continue in the 1988-89 award year. Applicants whose income and assets produced the highest eligibility for Pell Grants have seen the maximum Pell Grant increase by 50% since 1975-76. During this same period of time, the college costs they faced increased by about 150%. Pell Grants have lost purchasing power since 1975-76 for six of the eight Pell applicant cases examined in this study. In only one case did applicant eligibility increase.

Other students with discretionary income above amounts protected from assessment toward the family contribution have received new or expanded eligibility as a result of program changes made by Congress. These changes include reduced assessment rates against discretionary income, the addition of an allowance for state and local taxes, and increased multiple student offsets--changes that benefit only higher income applicants with discretionary family resources.

Under the constraint of limited program funding, the enhancements to Pell eligibility for the applicants who gained eligibility have been financed partially but significantly by the loss of Pell Grant purchasing power for those who were the original focus of the Basic Educational Opportunity Grant Program.

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This study was an outgrowth of a project undertaken by Shelley Holtman Winking at the Illinois State Scholarship Commission, Springfield, Illinois, in 1983-84. The original project was an attempt to identify the many decisions that constituted the design of each year's Pell Grant Program. Shelley undertook the study as a part of an internship with ISSC, under the supervision of the current author.

The project was revived and extended by the author in 1987-88 as a part of a series of studies examining financial aid in relation to minority student enrollment problems in American higher education. During this study, several individuals provided valuable information and suggestions. Among them were Steve Carter, Policy and Development Office, Office of Student Financial Assistance, U.S. Department of Education; Art Hauptman and Pat Smith, Division of Governmental Relations, American Council on Education; Maureen McLaughlin, Congressional Budget Office; and Mark Heffron and Mike Simpson, Student Needs Analysis Services, The American College Testing Program. The final paper was greatly improved by their commentary. Its deficiencies are, however, the responsibility of the author.

PELL GRANT PROGRAM CHANGES
AND THEIR EFFECTS ON APPLICANT ELIGIBILITY
1973-74 TO 1988-89

By Thomas G. Mortenson

Introduction

Purposes of Paper

Since the beginning of the Pell Grant Program in 1973-74, appropriations provided for grants to applicants have increased nearly every year. But so has the number of applicants, and so too have the college costs that they have faced. The financial need presented by applicants has grown faster than appropriations. As a result, the Pell Grants available to most classes of applicants have lost purchasing power since 1975-76 compared to the college attendance costs they are intended to help finance.

This loss in purchasing power of Pell Grants results directly from faster growth in the financial need of applicants than growth in dollars provided by Congress. Program funding need is the product of application volume and the need presented on each application. That need - the difference between college attendance costs and the resources available to applicants - is multiplied by the combined effects of college attendance costs increasing faster than inflation and the growth in low income Pell applicants, particularly older, independent students. These demands on Pell Program resources are largely determined by economic forces beyond the influence or control of Congress.

One additional factor in the only partially funded growth in need of Pell Grant applicants is under the direct control of Congress and is the focus of this paper. That is the expanded eligibility for Pell Grants for individuals from incomes above the poverty level. Congress has extended Pell Grant eligibility through program changes enacted primarily in the Middle Income Student Assistance Act in 1978 and the Education Amendments of 1986. Thus, in addition to only partially funded growth in external demands on Pell Grant Program resources, Congress has added unfunded demands of its own to make more students more eligible for limited Program funds. Congress, through deliberate action, has shifted resources for increases in the maximum grant available to the lowest income Pell Grant applicants to others from higher income levels.

This loss of purchasing power for the foundation of all student aid programs has implications for the equity of higher educational opportunity goals of need-based student aid. Lowest income applicants--those judged unable to contribute toward the financing of their college costs--must turn to other forms of financial aid such as loans or employment to pay college expenses. Each alternative imposes current or future obligations on the applicant that grants such as Pell do not. To some degree, there are enrollment consequences from this shift.

The Pell Grant Program, therefore, remains the first and most important aid program for low income financial aid applicants.

Pell Grant Program Background

The federal Basic Educational Opportunity Grant Program was designed by Congress in the early 1970s to be the floor of the eligible student's financial aid package to help defray the costs of postsecondary education (Gladieux and Wolanin, 1976). Today the Program--now called the Pell Grant Program--remains largely true to that concept of its original mission. However, changes to the Program have been made by Congress during subsequent legislative reauthorizations (Hartle and Stedman, 1986). These changes have altered both student eligibility for the Grants as well as the purchasing power of the Grants relative to the college costs applicants face. The eligibility for Pell Grant aid of some groups of students has been increased by these changes, while for others eligibility has been reduced or eliminated.

This paper examines the effect of changes made in the design components of the Pell Grant Program on applicant eligibility since the Program's first year of operation in 1973-74. These changes were made primarily in the 1978 Middle Income Student Assistance Act and the 1986 Education Amendments to the Higher Education Act of 1965. The four Program design components examined in this paper are: classes of eligible applicants, the formulas used to determine family contribution, college costs allowed, and the payment schedule.

The net effect of these Program design components on applicants is illustrated by calculating full-time Pell Grant eligibility for four dependent and four independent cases that remain constant over time. That is, income is expressed in constant dollars and family circumstances are fixed for the period from 1973-74 through 1988-89. Grants are calculated for these eight cases under three enrollment situations: an average cost public two-year college where the student lives off campus, and average cost public and private four-year colleges where the student lives on campus.

The net effect of Program design changes on Grant applicant eligibility over time may be measured in many ways: 1) the expected family contribution (SEI/SAI), 2) the expected family contribution effort (SAI as a percent of income), 3) the amount of the Pell Grant for which the applicant is eligible, 4) the proportion of college budgets covered by the Pell Grant, 5) the amount and proportion of need met by the Pell Grant plus the expected family contribution, 6) the amount and proportion of unmet need remaining after the family contribution and Pell Grant are deducted from these college attendance costs, and 7) by the amount of unmet need expressed as a percent of family income. This paper illustrates Pell Grant purchasing power as a proportion of actual college attendance costs. Additional descriptive measures are provided in appendix tables.

The federal Higher Education Act of 1965 inaugurated the federal commitment to needs-tested grant aid for college students with the Educational Opportunity Grant Program (EOG). This Program was modified and renamed the Supplemental Educational Opportunity Grant Program (SEOG) with the 1972 Amendments to the Higher Education Act. More importantly, Congress at that time created the Basic Educational Opportunity Grant Program (BEOG)--which, since 1980, has been called the Pell Grant Program--with a specific focus on grants directed to low income populations. The original Higher Education Act has been modified substantially and repeatedly since 1965, most notably regarding the Pell Grant Program in 1972, 1978 and 1986.

The focus of BEOG/Pell was the provision of grants to students from lower family incomes based on the demonstrated financial need of applicants to pay college attendance costs. Periodically, Congress has extended Pell Grant eligibility to additional students by changing Program design components. These extensions have primarily benefited applicants with discretionary income beyond the amount protected by family size offsets within the formula.

Table 1 summarizes the scale of the Program since its inception. Between 1973-75 and 1986-87, approximately 57 million applications were submitted to the Pell Grant Program for assistance. Thirty million Grants from these applications have been made, at a total cost of $28 billion. Currently, about one out of every five undergraduate students enrolled in public and private colleges in the U. S. is receiving a Pell Grant to help finance college attendance costs.

Note in Table 1 the changing proportion of official (unduplicated) applications that eventually become Pell Grant recipients. Changes in this proportion reflect both changing applicant characteristics and changes in the treatment of their applications under changing laws and rules governing the Pell Grant Program. Table A-1 in the Appendix provides more detail for this table.

TABLE 1
Pell Grant Program Summary Data
1973-74 to 1986-87

Award Year	Official Applicants	Pell Grant Recipients	% Recip	Dollars Paid (000)	Mean Grant
73-74	512,866	176,000	34.3%	$ 47,054	$ 267
74-75	1,304,877	553,653	42.4	349,544	631
75-76	2,339,337	1,220,744	52.2	912,115	747
76-77	3,590,379	1,948,329	54.3	1,451,126	745
77-78	3,844,047	2,028,208	52.8	1,511,916	745
78-79	3,885,393	1,914,673	49.3	1,540,788	805
79-80	4,186,716	2,717,913	64.9	2,358,689	868
80-81	4,825,420	2,845,870	59.0	2,388,750	839
81-82	4,945,760	2,784,463	57.5	2,297,421	825
82-83	5,118,558	2,612,571	51.0	2,417,811	925
83-84	5,453,548	2,848,587	52.2	2,792,117	980
84-85	5,514,029	2,833,345	51.4	3,035,191	1,071
85-86	5,627,131	2,910,174	51.7	3,572,006	1,227
86-87	5,834,277	2,763,408	47.9	3,398,795	1,230
Total	56,982,338	30,157,938	52.9	$28,073,323	$ 931

Source: Appendix Table A-1.

Effects of Changes on Pell Grant Eligibility

To illustrate the effects of changes in the four areas of Program design on applicant eligibility, four dependent and four independent cases that are representative of applicant situations have been selected. Their respective Pell Grants were calculated at off-campus average cost public two-year, on-campus public four-year and on-campus private four-year colleges for each year 1973-74 through 1988-89. Note that for each case, applicant circumstances do not change. Therefore, changes in Pell Grant eligibility over time are the result of changes in Program design and changes in the college costs that Pell Grants are designed to address.

Dependent Cases

The four dependent cases selected for testing are the following:

- **Case D1:** Pell applicant from a family of four, one wage earner, one in college, family income at poverty level, and no assessable assets.
- **Case D2:** Pell applicant from a family of four, one wage earner, one in college, family income at the Bureau of Labor Statistics lower budget level for a family of four, and no assessable assets.
- **Case D3:** Pell applicant from a family of four, one wage earner, one in college, family income at the BLS intermediate budget level, and no assessable assets.
- **Case D4:** Pell applicant from a family of four, one wage earner, two in college, family income at the BLS intermediate budget level, and no assessable assets.

The Pell Grants received by dependent applicants in the above cases are presented in Table 2.

TABLE 2

Pell Grant Eligibility for Dependent Applicants
1973-74 to 1988-89

Academic Award Yr	Case D1: Poverty Income Pub 2	Pub 4	Priv4	Case D2: BLS Lower Budget Pub 2	Pub 4	Priv4	Case D3: BLS Intermediate Pub 2	Pub 4	Priv4	Case D4: BLS Intermediate Pub 2	Pub 4	Priv4
1973-74	$ 452	$ 452	$ 452	$ 263	$ 263	$ 263	$ 0	$ 0	$ 0	$ 102	$ 102	$ 102
1974-75	888	988	1050	578	578	578	0	0	0	188	188	188
1975-76	862	1038	1400	776	776	776	0	0	0	0	0	0
1976-77	888	1112	1400	776	776	776	0	0	0	0	0	0
1977-78	912	1162	1400	726	726	726	0	0	0	0	0	0
1978-79	912	1212	1600	912	956	956	0	0	0	214	214	214
1979-80	938	1288	1800	938	1288	1375	776	776	776	912	1076	1076
1980-81	938	1412	1800	888	1326	1326	676	676	676	888	976	976
1981-82	882	1482	1596	882	1096	1096	346	346	346	746	746	746
1982-83	988	1604	1604	983	983	983	0	0	0	293	293	293
1983-84	1013	1705	1725	1013	1125	1125	0	0	0	425	425	425
1984-85	1275	1850	1850	1150	1150	1150	0	0	0	450	450	450
1985-86	1590	2050	2050	1350	1350	1350	0	0	0	450	450	450
1986-87	1590	2050	2050	921	1130	1130	0	0	0	0	0	0
1987-88	1590	2050	2050	1250	1250	1250	0	0	0	350	350	350
1988-89	1770	2190	2200	1550	1550	1550	0	0	0	1050	1050	1050

Source: Appendix Table A-7.

Figures 1 through 4 on the following pages illustrate the proportion of actual college attendance costs covered by the Pell Grants available to applicants in the four cases at each of the three types of colleges the applicant might attend. The actual college attendance costs used in this study are shown in Appendix Table A-2 and are based on national average tuition and fee and room and board data collected by the U.S. Department of Education, and other direct and indirect college attendance cost data collected through surveys by the California Student Aid Commission. (A future ACT Financial Aid Research Report will provide more of this data for the purpose of constructing College Attendance Price Indices.)

Figure 1 represents the purchasing power of the Pell Grant available to a dependent applicant from poverty level family income. After the first two years of start up of the original Basic Educational Opportunity Grant Program in 1973-74 and 1974-75, a fully funded Pell payment schedule was achieved in 1975-76 (although only freshmen, sophomores and juniors were eligible for Grants that year). Since 1975-76, the purchasing power of the Grant compared to actual college attendance costs has decreased. At a public four-year college, Grants that covered 36% of college costs in 1975-76 dropped to about 31% by 1988-89. The available Grant went from 31% of college costs at a public two-year college in 1975-76 to about 25% by 1988-89. If the student had faced attendance costs at a private four-year college, the purchasing power of the Grant would have dropped from 30% to 17% during this time period.

Figure 2 shows the purchasing power of the Pell Grant for a student from a Bureau of Labor Statistics (BLS) lower level family income level. Here again the available Grant has lost purchasing power relative to college costs. The proportion of college budgets covered by Pell dropped from about 28% to 22% in public two-year colleges between 1975-76 and 1988-89, from 27% to 22% in public four-year, and from 17% to 12% in private four-year colleges.

Figure 3 shows the purchasing power of the Pell Grant for a student from a BLS intermediate budget level family income with one family member enrolled in college. Here the applicant would have been eligible for a Pell Grant only during the three year period of the Middle Income Student Assistance Act, beginning with 1979-80. For this relatively brief period, the applicant qualified for a Pell Grant at all three institutional types, for amounts that covered as much as 22% of actual college attendance costs. Since 1982-83, however, applicants for Grant assistance have not qualified for aid.

Figure 4 shows the purchasing power of a Pell Grant for an applicant from a BLS intermediate family income with two children from the same family enrolled in college at the same time. In this case, eligibility was for Grant assistance that fluctuated substantially over the life of the Program. Eligibility peaked during the MISAA years of 1978-79 through 1980-81, and will rise again in 1988-89.

FIGURE 1

PERCENT OF COLLEGE COSTS COVERED BY PELL GRANT
FOR A DEPENDENT STUDENT FROM POVERTY LEVEL FAMILY INCOME
AT THREE TYPES OF COLLEGES
1973-74 TO 1988-89

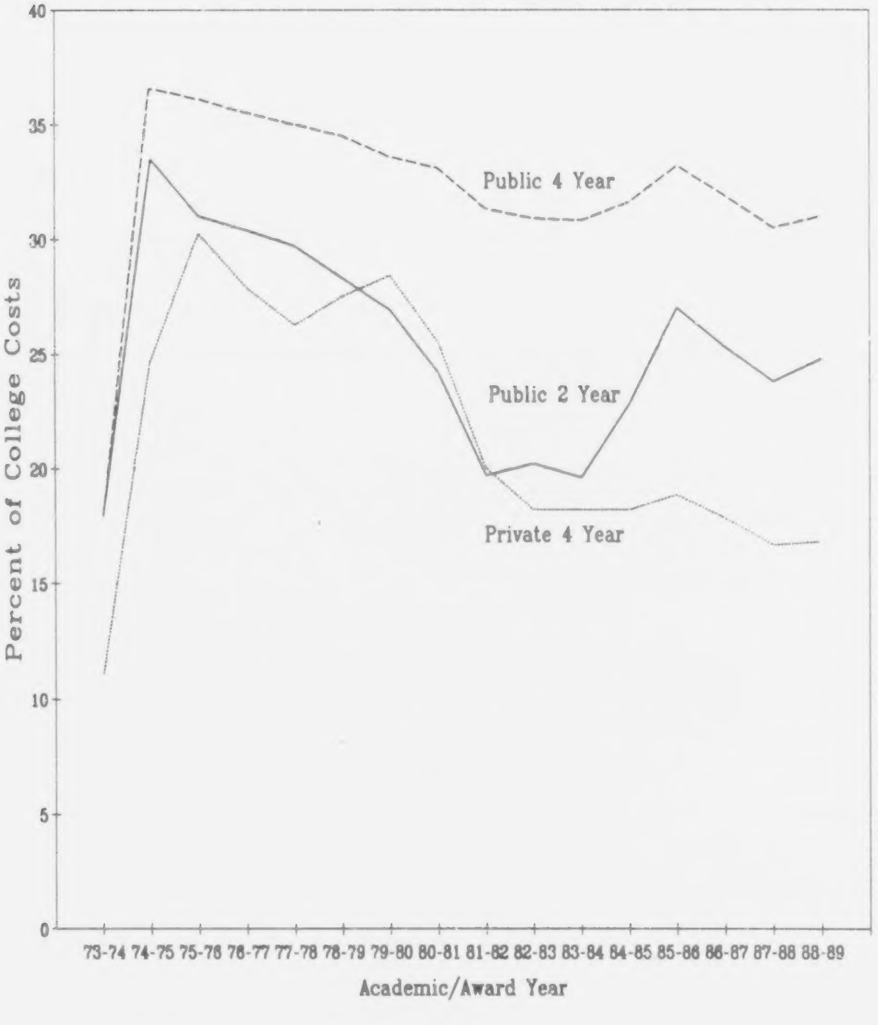


FIGURE 2

PERCENT OF COLLEGE COSTS COVERED BY PELL GRANT FOR A DEPENDENT STUDENT FROM BLS LOWER LEVEL FAMILY INCOME AT THREE TYPES OF COLLEGES

1973-74 TO 1988-89

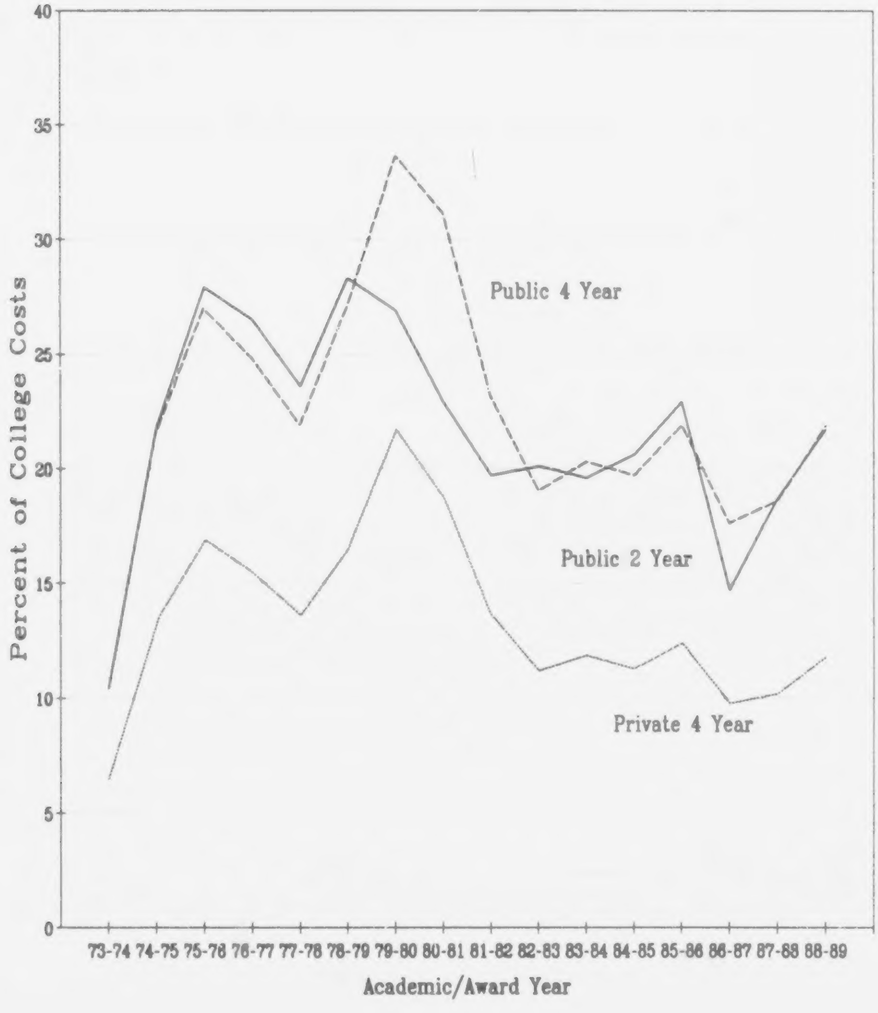


FIGURE 3

PERCENT OF COLLEGE COSTS COVERED BY PELL GRANT
FOR A DEPENDENT STUDENT FROM BLS INTERMEDIATE LEVEL FAMILY INCOME
AT THREE TYPES OF COLLEGES
1973-74 TO 1988-89

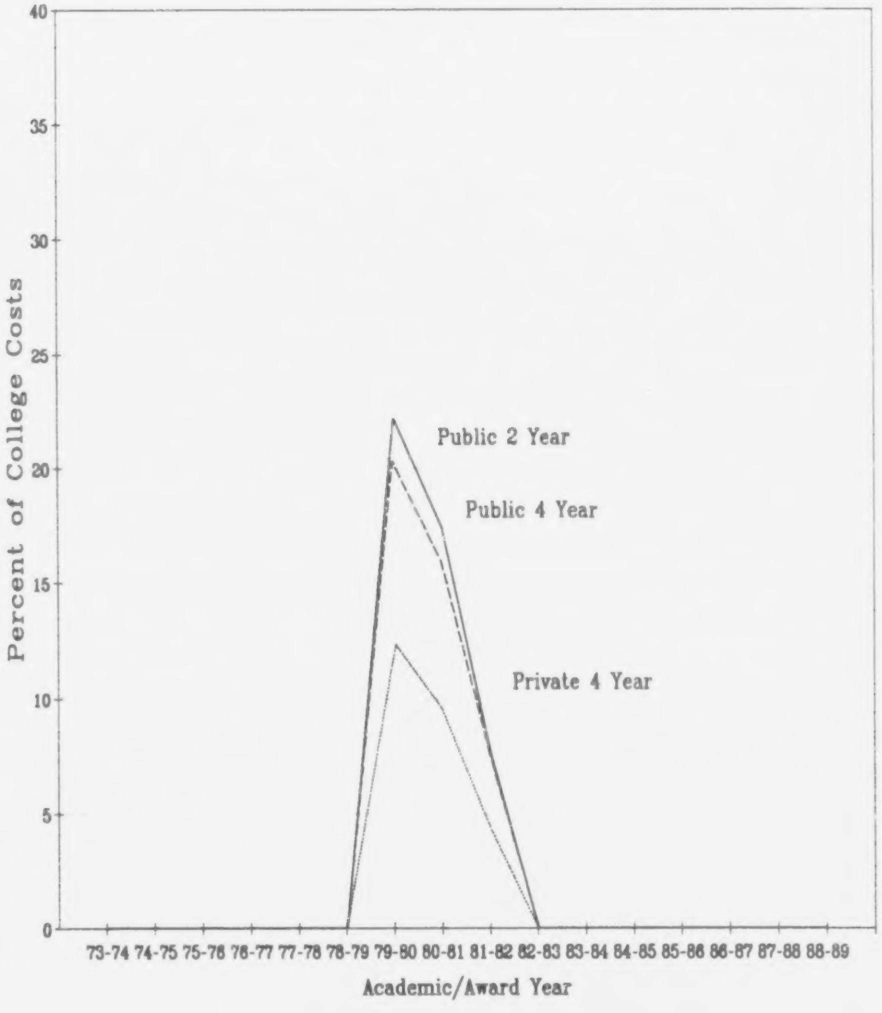
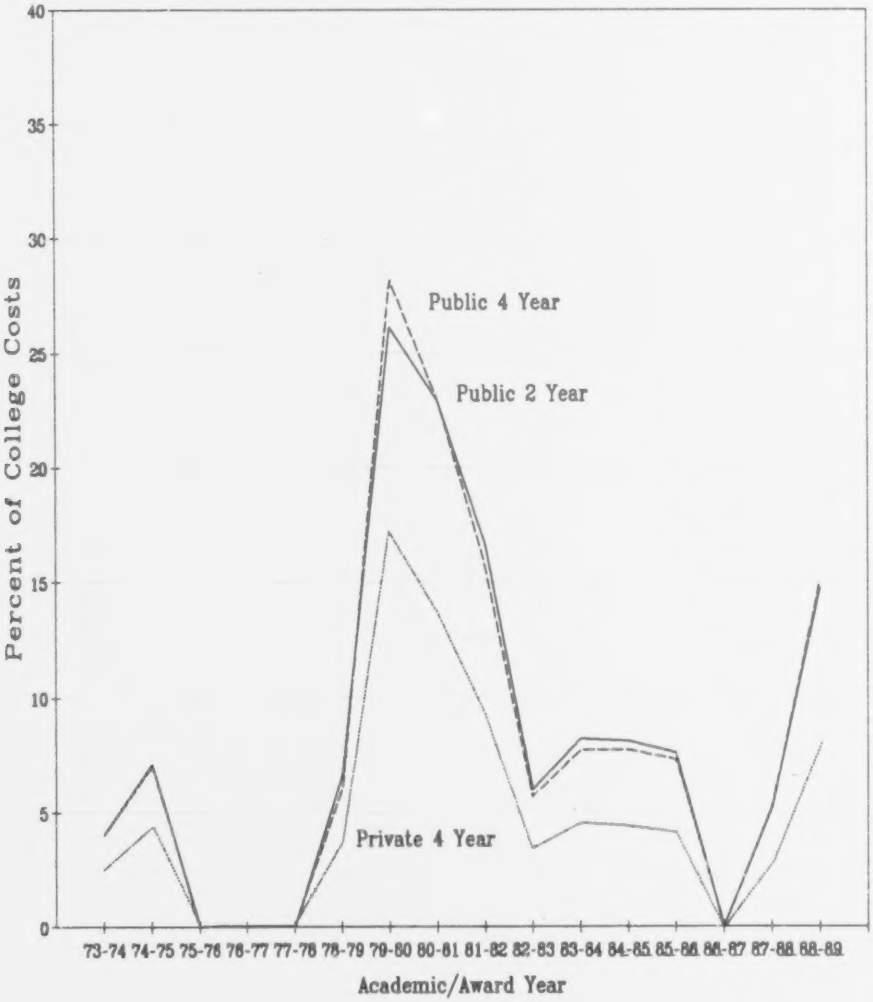


FIGURE 4

PERCENT OF COLLEGE COSTS COVERED BY PELL GRANT
FOR A DEPENDENT STUDENT FROM BLS INTERMEDIATE BUDGET
FAMILY INCOME, TWO IN COLLEGE, AT THREE TYPES OF COLLEGES
1973-74 TO 1988-89



Independent Cases

The four independent cases selected for testing are the following:

- **Case I1:** Pell applicant who is single, with income at 50% of the poverty level, no assets.
- **Case I2:** Pell applicant who is single, with income at 100% of the poverty level, no assets.
- **Case I3:** Pell applicant who is single, with one dependent, with unearned income at 100% of poverty level, no assets.
- **Case I4:** Pell applicant who is married, with income at 150% of poverty level, one in college and no assets.

When Pell applicant eligibility is calculated for these four cases at the three types of colleges used in the previous, dependent case examination, the applicants would be eligible for the following Grant amounts.

Table 3
Pell Grant Eligibility for Independent Applicants
1973-74 to 1988-89

Academic Award Yr	Case I1: Single, Income at 50% of Poverty			Case I2: Single, Income at 100% of Poverty			Case I3: Single, Dependent Inc. 100% Poverty			Case I4: Married, Income 150% of Poverty		
	Pub 2	Pub 4	Priv4	Pub 2	Pub 4	Priv4	Pub 2	Pub 4	Priv4	Pub 2	Pub 4	Priv4
1973-74	$ 363	$ 363	$ 363	$ 70	$ 70	$ 703	$ 443	$ 443	$ 443	$ 217	$ 217	$ 217
1974-75	776	876	882	162	162	162	888	988	1050	578	578	578
1975-76	862	1038	1176	226	226	226	862	1038	1400	776	776	776
1976-77	888	1112	1126	0	0	0	888	1112	1400	676	676	676
1977-78	912	1076	1076	0	0	0	912	1162	1400	626	626	626
1978-79	912	1212	1312	214	214	214	912	1212	1580	758	758	758
1979-80	938	1288	1800	938	1288	1800	938	1288	1800	826	826	826
1980-81	888	1362	1750	888	1362	1750	888	1362	1750	888	1226	1226
1981-82	882	1482	1670	882	1446	1446	882	1482	1596	882	946	946
1982-83	988	1674	1674	988	1465	1465	988	1651	1651	858	858	858
1983-84	1013	1800	1800	1013	1575	1575	1013	1675	1675	975	975	975
1984-85	1275	1900	1900	1275	1750	1750	1275	1750	1750	1050	1050	1050
1985-86	1590	2100	2100	1590	1950	1950	1590	1950	1950	1150	1150	1150
1986-87	1590	2100	2100	1590	1930	1930	1590	1950	1950	565	565	565
1987-88	1590	2100	2100	1590	1850	1850	1590	1950	1950	1050	1050	1050
1988-89	1770	2190	2200	1770	2190	2200	1770	2190	2200	0	0	0

Source: Appendix Table A-12.

Table 3 shows gains and losses in eligibility for independent Pell applicants over the life of the Program. Single independents with incomes at the federal poverty level have gained eligibility, especially since 1979-80. On the other hand, married independent Pell applicants with incomes at 150% of the poverty level where only one member is in college will lose all of their Pell eligibility in 1988-89.

The charts on the following pages illustrate changing Pell applicant eligibility, and met and unmet need for the four cases since 1973-74.

FIGURE 5

PERCENT OF COLLEGE COSTS COVERED BY PELL GRANT
FOR A SINGLE INDEPENDENT STUDENT WITH INCOME AT 50% OF
POVERTY LEVEL, AT THREE TYPES OF COLLEGES
1973-74 TO 1988-89

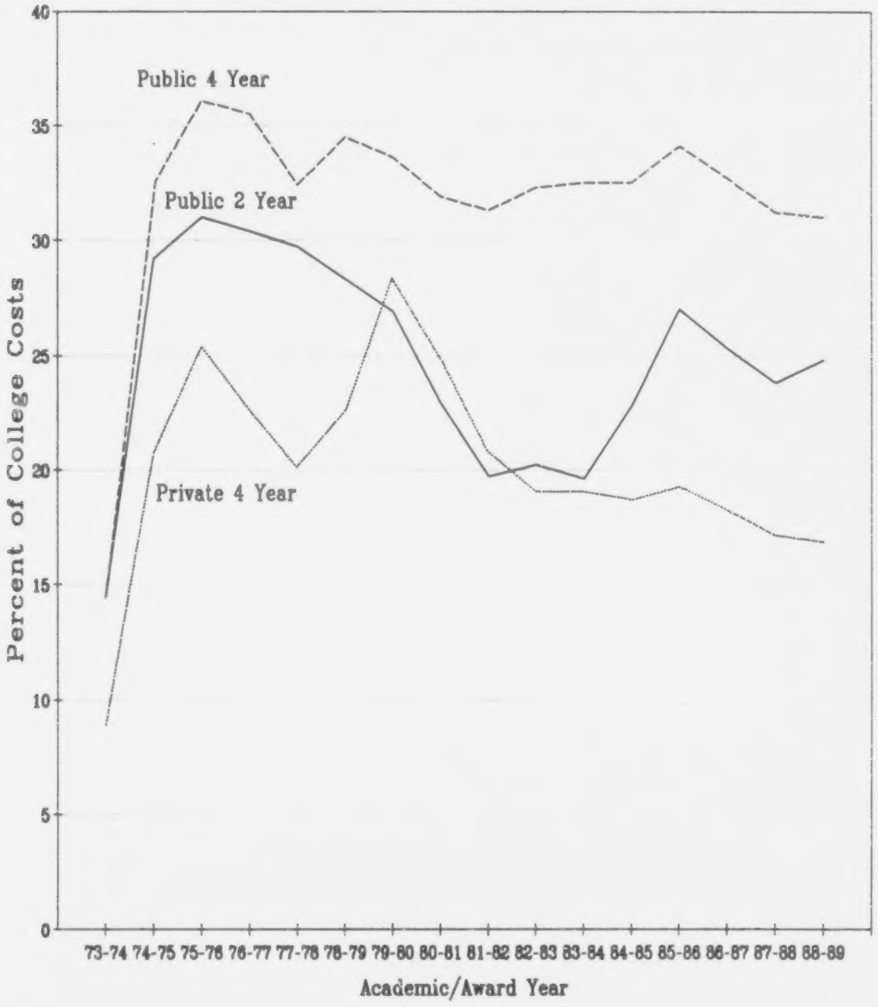


FIGURE 6

PERCENT OF COLLEGE COSTS COVERED BY PELL GRANT
FOR A SINGLE INDEPENDENT STUDENT WITH INCOME AT 100% OF
POVERTY LEVEL, AT THREE TYPES OF COLLEGES
1973-74 TO 1988-89

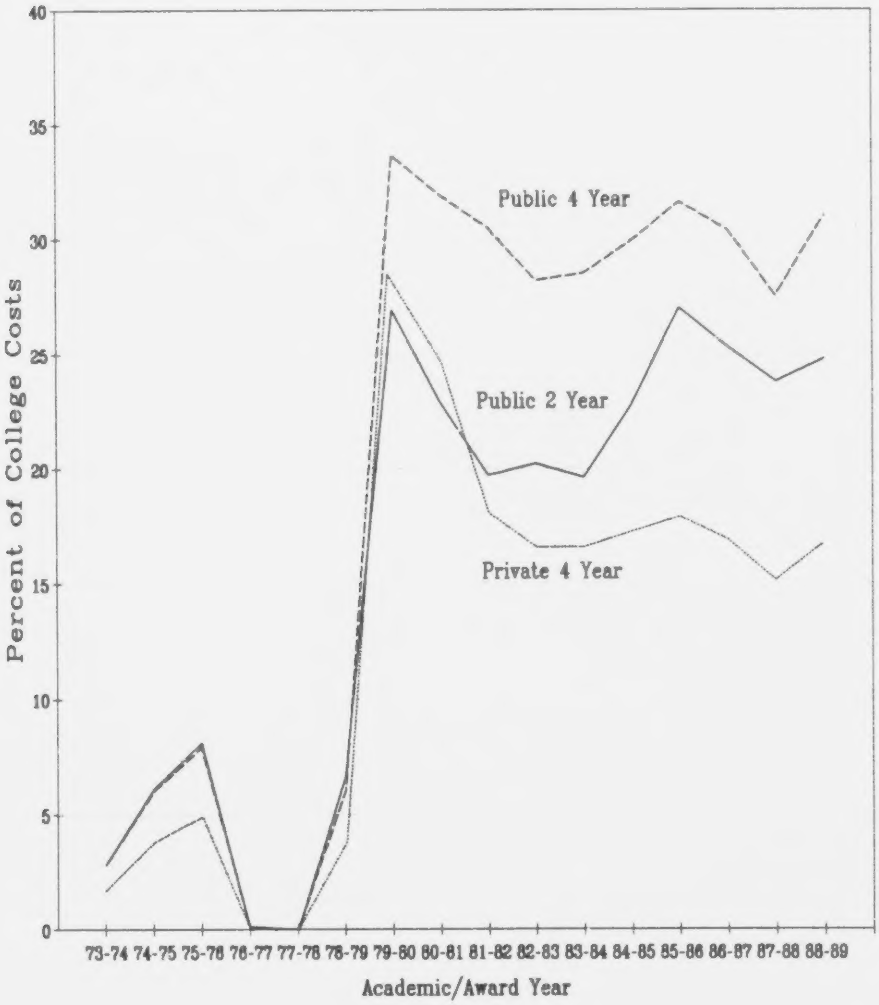


FIGURE 7

PERCENT OF COLLEGE COSTS COVERED BY PELL GRANT FOR AN UNMARRIED INDEPENDENT STUDENT WITH A CHILD, INCOME AT 100% OF POVERTY LEVEL, AT THREE TYPES OF COLLEGES 1973-74 TO 1988-89

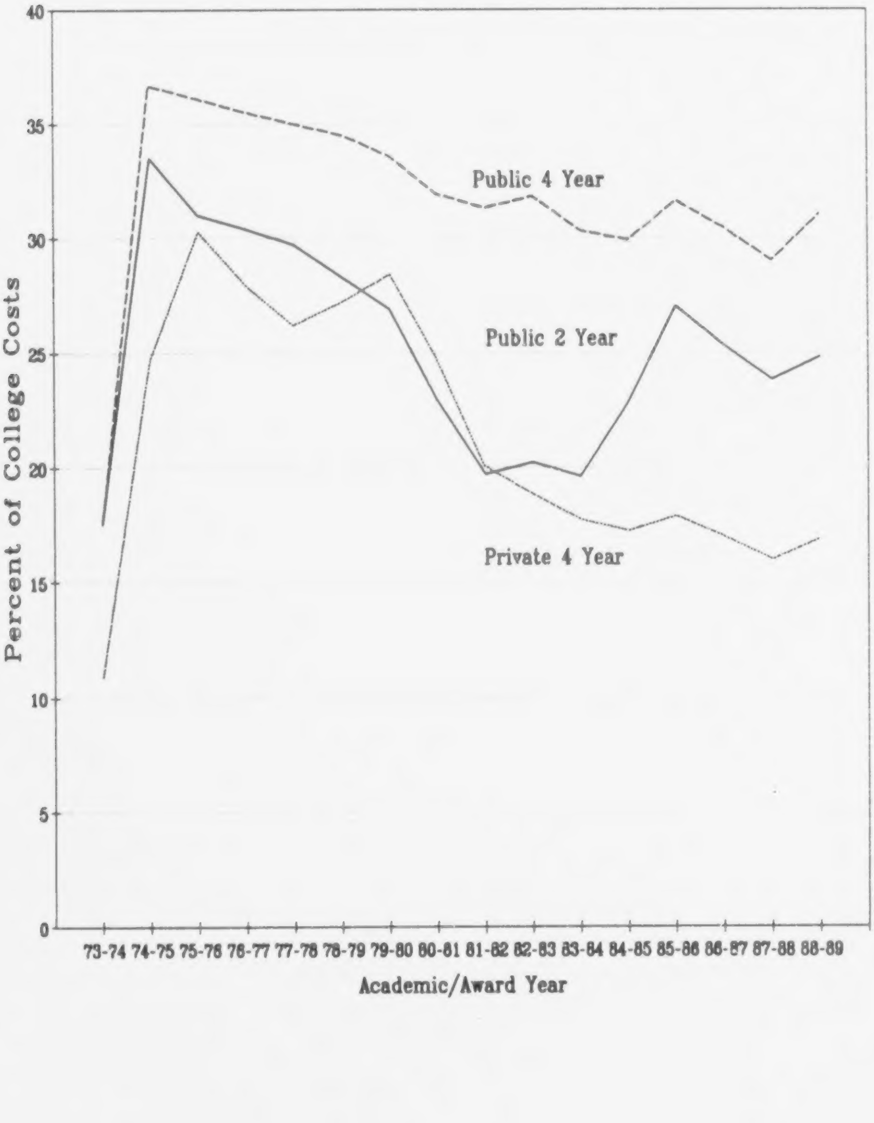
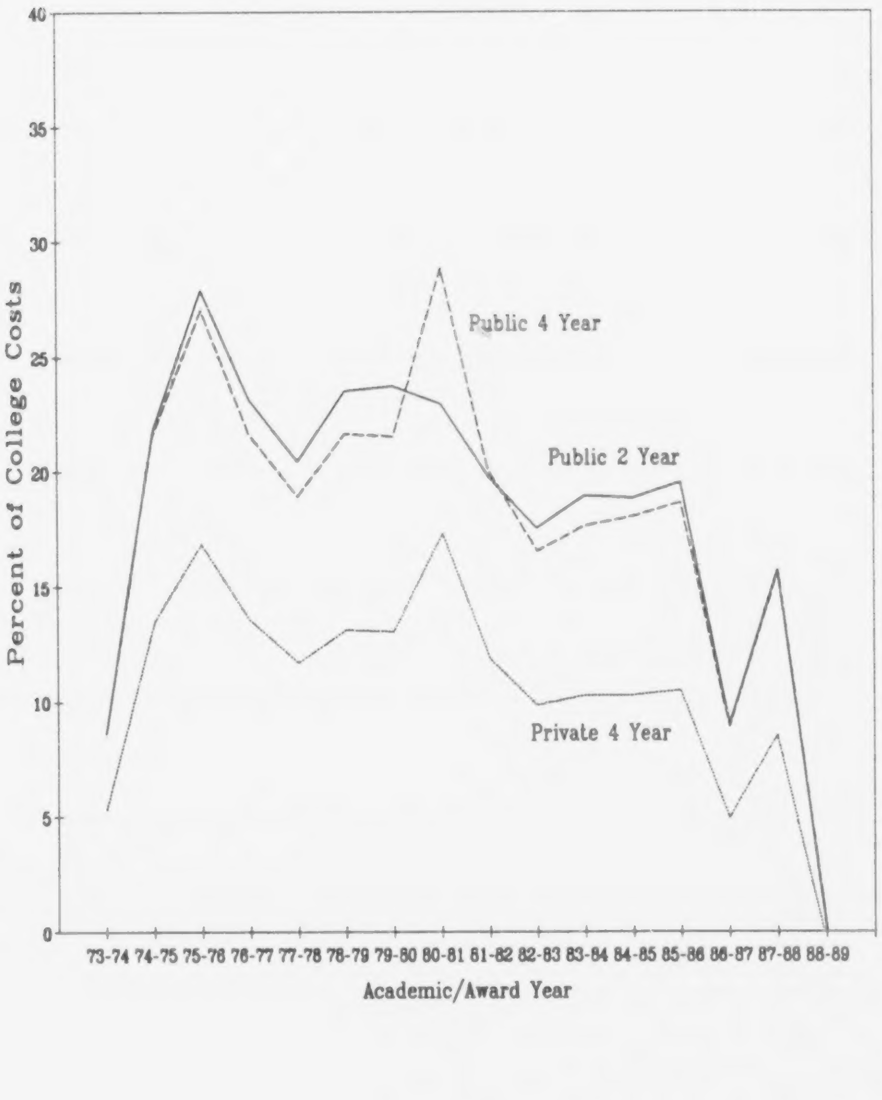


FIGURE 8

PERCENT OF COLLEGE COSTS COVERED BY PELL GRANT FOR AN INDEPENDENT MARRIED STUDENT, WITH INCOME AT 150% OF POVERTY LEVEL, AT THREE TYPES OF COLLEGES 1973-74 TO 1988-89



Eligibility Design Components of the Pell Grant Program

The original federal objective of the Pell Grant Program was to assist low income aid applicants to finance their higher educational attendance costs through the provision of a grant. The federal policy has been clear and consistent that Pell alone would not cover all college attendance costs - only as much as about half of the attendance costs recognized in the Program - but Pell Grants would be the first source of aid in financing college costs. With this Grant as the floor of the applicant's aid package, other financial aid from other federal, state and institutional sources would be used to complete the financing of the student's direct and indirect college attendance costs.

To fulfill the above role, the Pell Grant Program consists of Program design elements that determine applicant eligibility for the Grant. These design elements are: 1) specified classes of eligible applicants, 2) Student Aid Index formula, 3) allowable college costs, and 4) the payment schedule. Each of these is described below.

Classes of Eligible Applicants

Since the beginning of the Program, applicants for aid have been required to meet specified criteria in order to be eligible for consideration of a Pell Grant. During the first year of the Program in 1973-74, this list consisted of just three eligibility criteria: the applicant had to have begun studies after July 1, 1973 (thereby limiting eligibility to freshmen), be enrolled full-time and at an eligible institution. Gradually, this list has been expanded to address additional federal concerns and now includes over a dozen applicant eligibility criteria.

Table 4 on the following page summarizes the classes of Pell applicants that are eligible for consideration. In many respects, eligibility has been greatly expanded since the Program's first year: freshmen eligibility in 1973-74 was expanded to include all undergraduates by 1976-77, and full-time enrollment was replaced by half-time enrollment in 1975-76; this, in turn, could be replaced by less than half-time enrollment as early as 1989-90.

In other respects, applicant eligibility has been restricted in ways that address specific Congressional concerns. For example, in 1983-84 Congress implemented the requirement that students make satisfactory academic progress towards completion of their programs of study while receiving Pell Grants. Congress has also established applicant eligibility standards that eliminate applicant eligibility for those who have defaulted on a federal student loan, who owe refunds on prior Pell or SEOG Grants, or for males who have not registered with the Selective Service. As Congress chooses to address other issues in the public policy arena, additional changes can be expected in applicant eligibility criteria in the future.

Student Aid Index Formula

Pell applicant eligibility is carefully examined through formulas adopted to assess applicant and family ability to finance college attendance costs from their own resources. At this stage, formulas requiring detailed family information reflect Congressional judgments concerning what families need to

Table 4
Classes of Eligible Applicants

	Enrollment Status										
Academic/ Award Year	Year in School	Limit	Full-Time	Half-Time	Elig School	Elig Program	Citizen Elig Non-Cit	Satisfactory Academic Progress	No Default On Student Loan	Not Owe Refund on Pell/SEOG	Registered With Selective Service
1973-74	FR	After 7/1/73	Y	N	Y						
1974-75	FR+SO	After 4/1/73	Y	N	Y	Y					
1975-76	FR+SO+JR	After 4/1/73	Y	Y	Y	Y	Y				
1976-77	Under-grad	4 years	Y	Y	Y	Y	Y				
1977-78	"	4 years	Y	Y	Y	Y	Y				
1978-79	"	4 years	Y	Y	Y	Y	Y				
1979-80	"	4 years	Y	Y	Y	Y	Y				
1980-81	"	4 years	Y	Y	Y	Y	Y				
1981-82	"	none	Y	Y	Y	Y	Y				
1982-83	"	none	Y	Y	Y	Y	Y				
1983-84	"	none	Y	Y	Y	Y	Y	Y			
1984-85	"	none	Y	Y	Y	Y	Y	Y	Y	Y	Y
1985-86	"	none	Y	Y	Y	Y	Y	Y	Y	Y	Y
1986-87	"	none	Y	Y	Y	Y	Y	Y	Y	Y	Y
1987-88	"	none	Y	Y	Y	Y	Y	Y	Y	Y	Y
1988-89	"	5 years	Y	Y							

provide for themselves, and, of the remainder, what is to be expected from the Pell applicant (and his or her family) toward financing college attendance costs. The result is a financial expectation from family resources originally called Student Eligibility Index (SEI), and in 1982-83 renamed the Student Aid Index (SAI). While this number appears as a pure index value, the Pell Program derives this as a dollar amount. Separate formulas are used for dependent and independent Pell applicants. The phases of this determination are outlined briefly below.

Dependent/independent student status: Table 5 summarizes the changing definitions of dependency used in the Pell Grant Program since its inception. Basically, Congress has looked at three criteria to determine student status: Has applicant been claimed as an exemption on the parent's federal tax return? Has the applicant received more than a specified sum of cash or in kind from parents? Has the applicant lived in the home of the parent? Changes were made in these criteria in 1979-80 (MISAA), and further changes contained in the 1986 Amendments became effective in 1987-88.

TABLE 5

Independent Status Definition in Pell Grant Program
1973-74 to 1988-89

Academic/ Award Year	Exemption claimed on Parent's Tax Return	Parental Contribution Limit	Time Limit in Parent's Home
1973-74	Not claimed in prior/current/ following year	$600, in cash or in kind, prior/current, following year	2 consecutive weeks in prior/current/ following year
1974-75	"	"	"
1975-76	"	"	"
1976-77	"	"	"
1977-78	"	"	"
1978-79	"	"	"
1979-80	"	$750	6 weeks
1980-81	"	"	"
1981-82	"	$1000	"
1982-83	"	$750	"
1983-84	"	"	"
1984-85	"	"	"
1985-86	"	"	"
1986-87	"	"	"
1987-88	"	Was at least 24. Was a veteran. Orphan or ward of the court. Own dependents. More than $4000 in resources. Married/ or professional student.	
1988-89	"		

Source: OSFA, U.S. Department of Education.

Dependent SAI formula: The Pell formula's analysis of the dependent applicant and his/her family's ability to finance college attendance costs follows commonly used methods of ability to pay models, of which income tax models are a familiar example. However, assets also enter into this analysis, as do other factors relevant to college attendance. The general dependent Pell model is clearly spelled out in Pell work sheets:

Family income:	Parent's income + Married couple working deduction + Parent's social security benefits + Parent's AFDC + Parent's other income and benefits + 1/2 Student's Veteran's benefits - Parent's federal income taxes - Family size offset - Employment expense offset - Elementary/secondary tuition = Parent's discretionary income x Assessment rates = Contribution from family income
Parent's assets:	Net value of parents' assets - Asset reserve + Parents' other net assets - Asset reserve x Assessment rate = Contribution from parents' assets
Parental contribution:	Contribution from family income + Contribution from parents' assets x Multiple student adjustment = Total parental contribution
Student's assets	Net value of assets x Assessment rate = Contribution from student assets
Student's income	Student's taxable income - Federal income taxes paid + Student's untaxed income and benefits - Dependent student offset x Assessment rate = Contribution from student income
Student Aid Index	Total parental contribution + Contribution from student assets + Contribution from student income = Student Aid Index

For the purpose of the analysis of effects of changing Pell Grant Program design attributes on applicant eligibility, parent and student variable inputs are held constant in this study. Therefore, changes in observed applicant

Table 6
Pell Grant Formula Major Features Changed Since Inception

Academic Award Year	Taxes Allowed	Family Size Offset								Discretionary Income Assessment Rate				Multiple Student Offset			
											Independent						
		1	2	3	4	5	6	7	Each Addl	Dependent	Single	Married With Spouse	With Dep Other Than Spouse	1	2	3	4
1973-74	FED	700	2800	3350	4300	5050	5700	6300	700	$1-4999:20% $5000+:$1000+30%	75%	50%	40%	100%	70%	50%	40%
1974-75	"	850	3050	3650	4650	5500	6200	6900	700	"	"	"	"	"	"	"	"
1975-76	"	950	3400	4100	5200	6150	6950	7700	800*	"	"	"	"	"	"	"	"
1976-77	"	1000	3650	4400	5600	6600	7500	8300	850	"	"	"	"	"	"	"	"
1977-78	"	1050	3850	4650	5900	6950	7900	8750	900*	"	"	"	"	"	"	"	"
1978-79	"	1100	4100	4950	6300	7400	8400	9300	950*	"	"	"	"	"	"	"	"
1979-80	"	3450	4450	5400	6850	8050	9150	10100	1000*	10.5%	"	"	"	"	"	"	"
1980-81	"	3850	5000	6050	7700	9050	10250	11350	1150*	"	"	25%	25%	"	"	"	"
1981-82	"	3850	5000	6050	7700	9050	10250	11350	1150*	"	"	"	"	"	"	"	"
1982-83	"	4200	5450	6600	8400	9900	11200	12450	1250	$1-5000:11% $5-10k:$550+13% $10k-15k:$1200+18% $15k+:$2100+25%	"	"	"	"	"	"	"
1983-84	"	4500	5800	7100	9000	10600	12000	13400	1400		"	"	"	"	"	"	"
1984-85	"	4700	6000	7300	9300	11000	12400	14000	1600	"	"	"	"	"	"	"	"
1985-86	"	4900	6200	7500	9300	11000	12400	14000	1600	"	"	"	"	"	"	"	"
1986-87	"	5100	6400	7800	9900	11800	13300	14900	1600	"	"	"	"	"	"	"	"
1987-88	"	5200	6500	8000	10100	12100	13600	15300	1700	"	"	"	"	"	"	"	"
1988-89	FED+STATE	5300	6700	8100	10400	12300	13800	15600	1800	"	"	75%	$1-5000:11% $5-10k:$550+13% $10k-15k:$1200+18% $15k+:$2100+25%	100%	50%	33%	25%

*Approximate.

eligibility were the result of changes in either Program design components (here SAI formula components) or the college attendance costs faced by the Pell applicant.

Table 6 summarizes the major changes in the Pell SAI formula that occurred between 1973-74 and 1988-89. These include the change in the family size offset calculation in 1979-80 and the freezing of that allowance in 1981-82, and the inclusion of the state tax allowance and the change in the multiple student offset in 1988-89.

However, the greatest change in the dependent Pell SAI formula has been in the rates at which discretionary parental income has been assessed to finance college costs. During the first six years of Pell, this rate expected parents to contribute 20% of the first $5000 and 30% of all discretionary income above $5000 toward the college costs of their children. In 1979-80, as a result of the Middle Income Student Assistance Act (MISAA), this rate was dropped to 10.5% for all discretionary income. Three years later, progressivity was partially restored to these rates. The assessment rates that became effective in 1982-83 were 11% on the first $5000 of discretionary parental income, 13% on the next $5000, 18% on the third $5000, and 25% on all discretionary income above $15,000. These rates are well below the rates that existed before MISAA, but above the MISAA-era rates.

Independent SAI formula: While the structure of the Pell dependent formula has been relatively stable over the life of the Program, the structure of the independent formula has not. This independent formula instability is a result of continuing attempts by Congress to design a method of fairly determining an expectation of contribution from independent applicant resources that accommodates a wide variety of independent circumstances. These circumstances include single with and without dependents, married with and without dependents and number enrolled in college one or more than one, and presence or absence of business or farm assets. The continuing attempts to address this issue through redefinition of independent status and changes to assessment rates against discretionary income reflect the difficulties and unresolved problems independent student status presents to Congress.

The simplest independent applicant case is the single student. The 1987-88 structure of the Pell SAI formula for this case is the following:

Student income: Income
+ Social Security benefits
+ Other untaxed income
+ 1/2 Veteran's educational benefits
- Federal Income taxes
- Family size offset
- Unusual medical expenses
x Assessment rate
= Contribution from student income

Student assets: Net assets
x Assessment rate
= Contribution from student assets

Student Aid Index Contribution from student income
+ Contribution from student assets
= Student Aid Index (SAI)

For family sizes greater than one, the Pell independent SAI formula adds steps, such as the multiple student adjustment, and uses assessment rates against income and assets that are lower than for a single student. The general structure of the preceding formula, however, remains similar.

Of particular importance to single independent applicants are the family size offset and assessment rates against discretionary income. Until 1979-80, the family size offset for a family size of one was less than half the federal poverty level. This meant that many single Pell applicants living below the poverty line were unable to qualify for maximum Pell Grants. When the family size offset for a single independent student was increased to the poverty level in 1979-80, SAIs for these students dropped sharply and their resulting Pell Grant eligibility increased.

Also, of particular importance to independent Pell Grant applicants with family size greater than one have been the shifts in assessment rates against discretionary independent family income. Married independent discretionary family income was assessed at 50% from 1973-74 through 1980-81, when it was dropped to 25%. For 1988-89, this will be increased to 75%, making many previously eligible applicants no longer eligible for Pell Grant aid.

For independent families with dependents other than a spouse, the assessment rate has been steadily lowered, from 40% for the first seven years of the Pell Grant Program, to 25% for 1980-81 through 1987-88, to a progressive rate beginning at 11% for 1988-89. These changes, of course, greatly expand applicant eligibility for independents from these circumstances.

Allowable College Costs

The Pell Grant Program allows for the consideration of certain direct and indirect college attendance costs, namely tuition and fees, room and board or an alternative living allowance, and books, supplies and miscellaneous. The allowance for these components will be discussed in more detail shortly.

The Pell Program does not allow for opportunity costs of college attendance. Opportunity costs are frequently recognized in the Pell SAI formula as being present. For example, negative numbers may be calculated when determining expected contribution from parental income, residential assets, other net assets, and at other places in the dependent SAI formula. However, negative numbers are usually increased to zero when they appear in the formula, thus effectively eliminating the consideration of opportunity costs of college attendance for those from lowest income families.

The direct and indirect college attendance costs that Pell does recognize are discussed separately below.

Tuition and fees: Pell considers the actual tuition and fees faced by the applicant for aid to attend college. This is simple and direct.

Books and miscellaneous allowance: The Pell budget allows $400 for books and miscellaneous expenses of college attendance. The same number has been used for all Pell applicant college budgets since the inception of the Program in 1973-74 through 1987-88.

Living allowance: Pell college budgets between 1973-74 and 1987-88 allowed for three living arrangements: home, off campus, and on campus. The campus room and board rate was included in the college budget if the student lived on campus. An allowance for up to $1,600 was made if the student lived off campus, but not at home. An allowance of $1,100 was made for the student who lived at home.

Beginning in 1988-89, the living allowance and the books and supplies allowance will be combined into a single maintenance allowance. This will be $2,200 for all applicants living on or off campus, and $1,600 for those living at home.

Several aspects of this allowance are relevant to the consideration of Pell Grant coverage of actual college attendance costs. First, an allowance for maintenance of the student is also included in the family size offset against family income. Thus, the Pell Grant living allowance may be viewed as an allowance for the marginal living costs associated with college attendance. For the student living at home, the $1,100 allowance may properly be viewed as addressing commuting costs and food away from home.

This sum, however, has remained constant at $1,100 over the sixteen year history of the Program, from 1973-74 through 1987-88, when other prices in the economy (CPI) have increased by 166%. For the student living off campus, this allowance was increased from $1,100 to $1,600 in 1984-85, a 45% increase. Table 7 on the following page summarizes the major dimensions of the allowable cost components of the Pell college budget since 1973-74.

The difference between the Pell allowable college costs and the actual college attendance costs faced by students in the three college/housing settings used in this study is examined in more detail in Table 8. The estimated average college attendance costs actually faced by students includes the direct costs of tuition and fees, and books and supplies. The indirect costs included are average reported costs for food and housing, transportation, and other personal and miscellaneous living costs for nine months. The Pell allowable college costs include not only tuition and fees, living allowance, and books and miscellaneous allowances, but also nine months of marginal maintenance allowance in the family unit.

The results of this comparison show that, in all cases, Pell allowable college costs have not increased as fast as have the actual college attendance costs faced by students. For students living in campus dormitories at a public four-year college, Pell allowances that covered 96% of actual costs in 1973-74 covered 86% by 1987-88, and will probably cover about 59% in 1988-89. The decline was somewhat less for a student at a private four-year college - from 98% to 92% between 1973-74 and 1987-88, to about 77% in 1988-89. However, for a student living off campus at a public two-year college, the Pell allowance that covered 81% of actual college attendance costs in 1973-74 covered just 56% by 1987-88, despite the increase in the off campus living allowance from $1,100 to $1,600 in 1984-85. (Note that different assumptions about dependency will alter this comparison substantially.)

Table 7

Pell Grant Allowable Costs of Attendance

	Tuition & Fees	Books, Supplies & Miscellaneous	Living Allowance On-Campus	Living Allowance Off-Campus	Living Allowance Home	Child Care	Handicapped Expense
1973-74	Actual or Average	$400	Room & Board Actual/Average	$1100	$1100		
1974-75	"	"	"	"	"		
1975-76	"	"	"	"	"		
1976-77	"	"	"	"	"		
1977-78	"	"	"	"	"		
1978-79	"	"	"	"	"		
1979-80	"	"	"	"	"		
1980-81	"	"	"	"	"		
1981-82	"	"	"	"	"		
1982-83	"	"	"	"	"		
1983-84	"	"	"	"	"		
1984-85	"	"	"	$1100-$1600	"		
1985-86	"	"	"	"	"		
1986-87	"	"	"	"	"		
1987-88	"	"	"	"	"		
1988-89			$2,200	$2,200	$1,600	Up to $1,000	Actual

Source: Pell Grant Payment Schedule

TABLE 8: COMPARISON OF ESTIMATED ACTUAL AVERAGE COLLEGE ATTENDANCE COSTS
AND PELL ALLOWABLE COLLEGE COSTS, 1973-74 TO 1987-88

	Academic/Award Year														
	73-74	74-75	75-76	76-77	77-78	78-79	79-80	80-81	81-82	82-83	83-84	84-85	85-86	86-87	87-8
PUBLIC 2 YEAR COLLEGE - LIVING OFF CAMPUS															
Estimated Average Actual College Attendance Costs:															
Tuition & Fees	$274	$277	$245	$283	$306	$327	$355	$385	$432	$473	$528	$584	$620	$650	$68
Books & Supplies	$165	$173	$181	$190	$200	$210	$227	$272	$270	$288	$312	$336	$360	$384	$38
Food & Housing	$1,673	$1,755	$1,841	$1,931	$2,025	$2,124	$2,295	$2,547	$2,925	$3,150	$3,330	$3,546	$3,771	$4,014	$4,14
Transportation	$296	$311	$327	$343	$360	$378	$405	$630	$540	$585	$585	$630	$675	$684	$57
Personal/Misc.	$444	$466	$490	$514	$540	$567	$612	$675	$855	$990	$990	$1,116	$1,134	$1,230	$1,33
Total Actual Costs	$2,852	$2,982	$3,084	$3,261	$3,431	$3,606	$3,894	$4,509	$5,022	$5,486	$5,745	$6,212	$6,560	$6,962	$7,11
Pell Allowable College Costs:															
Tuition & Fees	$274	$277	$245	$283	$306	$327	$355	$385	$432	$473	$528	$584	$620	$650	$68
Books & Misc	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$40
Living Allowance	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,600	$1,600	$1,600	$1,60
Maintenance Allow.	$525	$525	$600	$638	$675	$713	$750	$863	$863	$938	$1,050	$1,200	$1,200	$1,200	$1,27
Allow. Pell Budget	$2,299	$2,302	$2,345	$2,421	$2,481	$2,540	$2,605	$2,748	$2,795	$2,911	$3,078	$3,784	$3,820	$3,850	$3,95
Difference	-$553	-$680	-$739	-$840	-$950	-$1,066	-$1,289	-$1,761	-$2,227	-$2,575	-$2,667	-$2,428	-$2,740	-$3,112	-$3,15
Pell % of Actual	80.6%	77.2%	76.0%	74.2%	72.3%	70.4%	66.9%	60.9%	55.7%	53.1%	53.6%	60.9%	58.2%	55.3%	55.6
PUBLIC 4 YEAR COLLEGE - LIVING ON CAMPUS															
Estimated Average Actual College Attendance Costs:															
Tuition & Fees	$463	$448	$469	$564	$596	$622	$662	$721	$813	$936	$1,052	$1,117	$1,200	$1,270	$1,34
Books & Supplies	$141	$170	$163	$189	$196	$202	$211	$225	$250	$263	$300	$313	$329	$358	$37
Room & Board	$1,043	$1,110	$1,188	$1,264	$1,336	$1,405	$1,536	$1,699	$1,888	$2,096	$2,233	$2,401	$2,550	$2,670	$2,79
Other Costs	$872	$968	$1,057	$1,118	$1,189	$1,280	$1,426	$1,619	$1,785	$1,891	$1,948	$2,016	$2,088	$2,120	$2,21
Total Actual Costs	$2,519	$2,696	$2,877	$3,135	$3,317	$3,509	$3,835	$4,264	$4,736	$5,186	$5,533	$5,847	$6,167	$6,418	$6,73
Pell Allowable College Costs:															
Tuition & Fees	$463	$448	$469	$564	$596	$622	$662	$721	$813	$936	$1,052	$1,117	$1,200	$1,270	$1,34
Books & Misc.	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$40
Room & Board	$1,043	$1,110	$1,188	$1,264	$1,336	$1,405	$1,536	$1,699	$1,888	$2,096	$2,233	$2,401	$2,550	$2,670	$2,79
Maintenance Allow.	$525	$525	$600	$638	$675	$713	$750	$863	$863	$938	$1,050	$1,200	$1,200	$1,200	$1,27
Allow. Pell Budget	$2,431	$2,483	$2,657	$2,866	$3,007	$3,140	$3,348	$3,683	$3,964	$4,370	$4,735	$5,118	$5,350	$5,540	$5,81
Difference	-$88	-$213	-$220	-$269	-$310	-$369	-$487	-$581	-$772	-$816	-$798	-$729	-$817	-$878	-$91
Pell % of Actual	96.5%	92.1%	92.4%	91.4%	90.7%	89.5%	87.3%	86.4%	83.7%	84.3%	85.6%	87.5%	86.8%	86.3%	86.4
PRIVATE 4 YEAR COLLEGE - LIVING ON CAMPUS															
Estimated Average Actual College Attendance Costs:															
Tuition & Fees	$1,925	$1,954	$2,084	$2,351	$2,520	$2,771	$3,020	$3,390	$3,855	$4,329	$4,726	$5,135	$5,550	$6,000	$6,48
Books & Supplies	$147	$165	$171	$183	$191	$202	$214	$231	$258	$263	$292	$319	$326	$349	$39
Room & Board	$1,115	$1,202	$1,301	$1,363	$1,448	$1,555	$1,679	$1,859	$2,094	$2,317	$2,518	$2,714	$2,950	$3,070	$3,19
Other Costs	$872	$968	$1,057	$1,118	$1,189	$1,280	$1,426	$1,619	$1,785	$1,891	$1,948	$2,016	$2,088	$2,120	$2,21
Total Actual Costs	$4,059	$4,289	$4,613	$5,015	$5,348	$5,808	$6,339	$7,099	$7,992	$8,800	$9,484	$10,184	$10,914	$11,539	$12,29
Pell Allowable College Costs:															
Tuition & Fees	$1,925	$1,954	$2,084	$2,351	$2,520	$2,771	$3,020	$3,390	$3,855	$4,329	$4,726	$5,135	$5,550	$6,000	$6,48
Books & Misc.	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$40
Room & Board	$1,115	$1,202	$1,301	$1,363	$1,448	$1,555	$1,679	$1,859	$2,094	$2,317	$2,518	$2,714	$2,950	$3,070	$3,19
Maintenance Allow.	$525	$525	$600	$638	$675	$713	$750	$863	$863	$938	$1,050	$1,200	$1,200	$1,200	$1,27
Allow. Pell Budget	$3,965	$4,081	$4,385	$4,752	$5,043	$5,439	$5,849	$6,512	$7,212	$7,984	$8,694	$9,449	$10,100	$10,670	$11,35
Difference	-$94	-$208	-$228	-$263	-$305	-$369	-$490	-$587	-$780	-$816	-$790	-$735	-$814	-$869	-$93
Pell % of Actual	97.7%	95.2%	95.1%	94.8%	94.3%	93.6%	92.3%	91.7%	90.2%	90.7%	91.7%	92.8%	92.5%	92.5%	92.4

Source: See Appendix Table A-2.

Payment Schedule

The final design component of each year's Pell Grant Program is the Pell Grant payment schedule. This table brings together each applicant's Student Aid Index and allowable college costs to determine the dollar amount of the Pell Grant for which the student has applied.

This table is often released quite late, six months or more after all other components of the Program have been decided and announced. The payment schedule represents the final opportunity for Congress and the Department of Education to resolve any differences that may exist between the anticipated cost of the program and the resources available to fund student Pell Grants. In this sense, the Pell Grant payment schedule is an important rationing device to balance revenues with anticipated expenditures. Rationing may occur in any of several ways, including the maximum grant amount, the maximum qualifying SAI, and/or the amount of the minimum grant.

The payment schedule is normally determined through a relatively straightforward process of calculation constrained by such factors as maximum and minimum allowable college costs, proportion of allowable costs to be covered by the Pell Grant, and the maximum Grant amount set by Congress as funding is reviewed. When available funding is inadequate, the payment schedule may be reduced in a variety of ways or as in the past, funds may be borrowed from future Pell appropriations to pay current Program obligations.

Table 9 summarizes the major design components of the Pell Grant payment schedule since 1973-74. The many variables available to design Pell eligibility are apparent here.

Table 9

Pell Grant Full-Time Payment Schedule Summary

Academic/ Award Year	Maximum Qualifying SEI/SAI	Minimum Allowable College Cost	Maximum Allowable College Cost	Grant Limit of Allowable College Cost	Minimum Grant	Maximum Grant	Payment Schedule
1973-74	$1149	$1100	$1250	50%	$ 50	$ 452	Reduced
1974-75	1200	1500	2100	50%	50	1050	Reduced
1975-76	1200	400	2800	50%	200	1400	Full
1976-77	1200	400	2800	50%	200	1400	Full
1977-78	1200	400	2800	50%	200	1400	Full
1978-79	1600	400	3200	50%	176	1600	Full
1979-80	1600	400	3600	50%	200	1800	Full
1980-81	1600	400	3600	50%	150	1750	Reduced
1981-82	1550	400	3500	50%	120	1670	Reduced
1982-83	1600	400	3600	50%	126	1674	Reduced
1983-84	1600	400	3600	50%	200	1800	Full
1984-85	1700	400	3800	50%	200	1900	Full
1985-86	1900	300	3500	60%	200	2100	Full
1986-87	1500	300	3500	60%	150	2100	Reduced
1987-88	1900	300	3500	60%	200	2100	Full
1988-89	2000	300	3799	60%	200	2200	Full

Source: Pell Grant Payment Schedule, Annual.

Implications for Applicant Eligibility

The original intent of Congress--to make substantial grant assistance available to students on the basis of financial need--remains intact today. However, Congress expanded its original definition of financial need with the Middle Income Student Assistance Act in 1978, and continues to expand this conception of middle income financial need with the 1986 Amendments to the Pell Grant Program.

Under budgetary limitations, the expansion of eligibility to new groups of students and increase in eligibility to some previously eligible students has occurred at the expense of lowest income aid applicants. As a result, the Pell Grant has lost purchasing power relative to the costs of attendance faced by lowest SAI Pell Grant applicants eligible since 1975-76.

Who gains and who loses under the changes in applicant eligibility made by Congress in the 1978 and 1986 amendments? Due to the different formulas employed, any effort to identify those who have gained and those who have lost Pell Grant eligibility requires that dependent and independent applicants be considered separately.

Dependent Gainers

Factors affecting eligibility: Changes made by Congress to dependent applicant eligibility for Pell Grants have quite consistently expanded eligibility for dependent applicants. These changes were largely made in the 1978 Middle Income Student Assistance Act, effective in 1979-80, and the 1986 Amendments, effective in 1988-89. Three changes are most important to the extension of Pell eligibility to dependent applicants from middle income backgrounds:

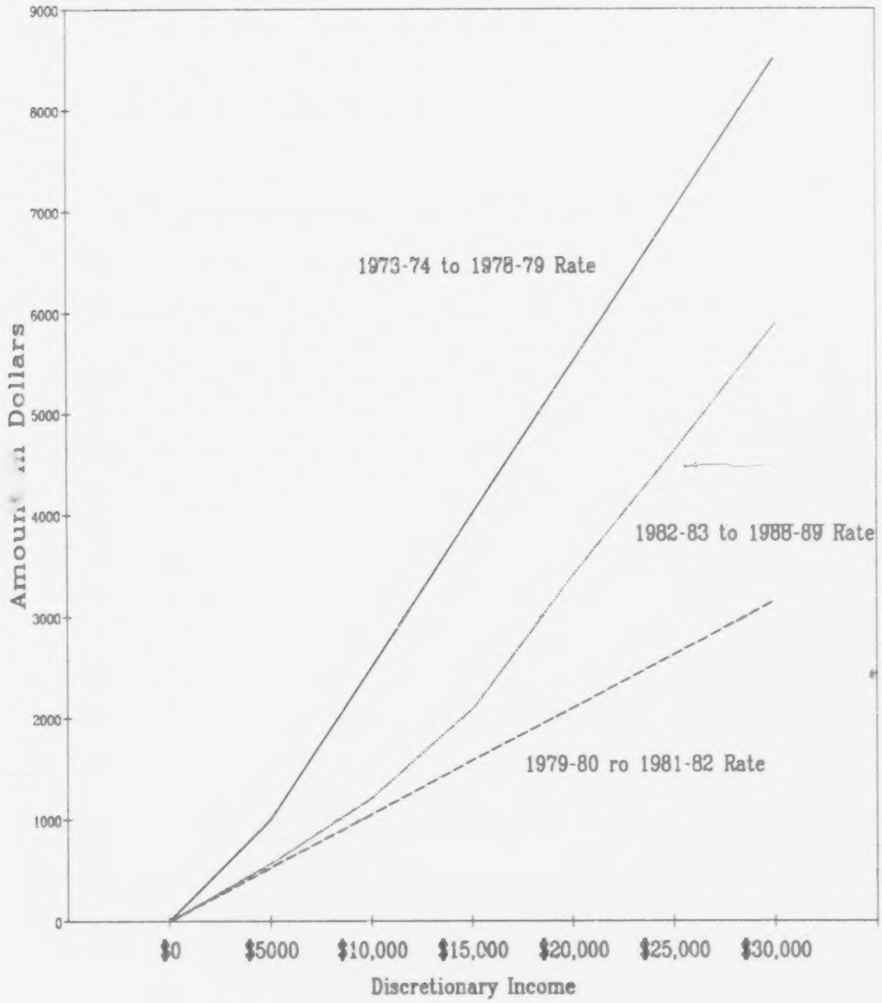
1. Reduced assessment rates against discretionary income (1979-80)
2. Allowance for state and other taxes (1988-89)
3. Reduced multiple student offset (1988-89)

The reduction in the assessment rate against discretionary income was the first and remains the most important effort by Congress to extend Pell eligibility to middle income aid applicants. The assessment rate against discretionary income was 20% on the first $5,000 and $30% on all discretionary income above $5,000 from 1973-74 through 1978-79. Beginning in 1979-80, these rates were reduced to 10.5% on all discretionary income, through the Middle Income Student Assistance Act. For 1982-83, these rates were increased slightly to 11% of the first $5,000 of discretionary income, 13% on the next $5,000, 18% on the next $5,000, and 25% on all discretionary income over $15,000. Despite their modification for 1982-83, these rates are well below the original assessment rates against discretionary income.

The effects of these three rate systems on the proportion of discretionary income taken for the SAI is illustrated in Figure 9. The net effect was and clearly remains to reduce the expected contribution from family income toward the SAI. This reduction in expected family contribution expands applicant eligibility for Pell Grants, but only for those with discretionary

FIGURE 9

PELL GRANT DEPENDENT APPLICANT
AMOUNT EXPECTED FROM DISCRETIONARY PARENTAL INCOME
DURING THREE PERIODS
1973-74 TO 1988-89



family income, and more for those with more discretionary family income. Applicants whose incomes fall below the family size offset--the poorest among Pell applicants--receive no benefit from this reduction in assessment rates against discretionary income because they do not have any.

The allowance for state and other taxes in the 1986 Amendments is effective in 1988-89. The allowance varies from state to state, but averages about 8% across all states. This allowance reduces the amount of discretionary family income assessable toward the family's SAI. The more discretionary family income there is, the greater is the benefit to dependent applicants. Applicants whose incomes fall at or below the family size offset--the poorest among Pell applicants--receive no benefit from this allowance.

The multiple student offset is another allowance that reduces the family's expected contribution toward meeting college costs when more than one family member is enrolled in college at the same time. Between 1973-74 and 1987-88, the multiple student offset was 70% when two family members were enrolled in college at the same time, 50% when three were enrolled, and 40% when four or more were enrolled. The 1986 Amendments reduced these rates to 50%, 33% and 25%, respectively. This reduction is a substantial benefit for families with several members enrolled concurrently and SAIs greater than zero. Applicants whose incomes fall below the family size offset--the poorest among Pell applicants--receive no benefit from this offset.

The effects of the above changes in the Pell Grant Program on applicant eligibility for Grants can be illustrated in a variety of ways. Three are shown here.

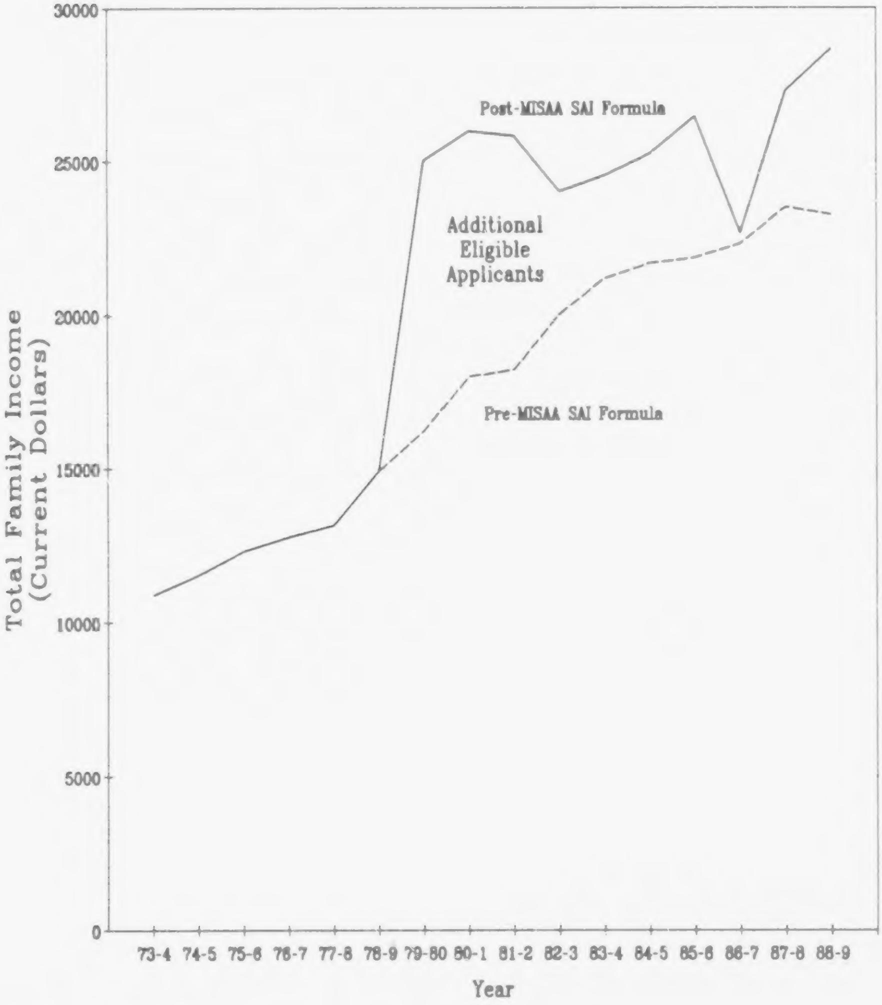
Maximum income cutoffs: Figure 10 illustrates the maximum family income at which an applicant qualifies for the minimum Pell Grant under pre-MISAA and post-MISAA SAI formulas. (This case is a family of four, one in college, with no assets. Other family sizes and circumstances will alter the positions of these curves.)

Except for the 1986-87 award year when a funding shortfall forced a reduction in the Pell payment schedule, the expanded middle income eligibility for Pell Grants initiated with MISAA in 1979-80 has been preserved through 1987-88 and further expanded in 1988-89. For 1988-89, the example of a family used here could qualify for the minimum ($200) Pell Grant up to an income of $28,600. Under pre-MISAA SAI formulas, with higher assessment rates against discretionary income and no allowance for state taxes, only families with incomes up to $23,200 would have qualified for the minimum $200 Grant.

In addition to this higher income limit for the minimum Pell Grant, all applicants eligible to receive Grants less than the maximum grant qualify to receive larger grants under post-MISAA SAI formulas than they would have under pre-MISAA SAI formulas. For example, the family with $23,200 in income that would have qualified only for a $200 Pell Grant in 1988-89 under the original Pell formula actually qualifies for a Grant of $1,150 because of the state and local tax allowance and the lower assessment rates against discretionary income.

FIGURE 10

MAXIMUM QUALIFYING FAMILY INCOME FOR A MINIMUM PELL GRANT UNDER PRE-MISAA AND POST-MISAA PELL SAI FORMULA 1973-74 TO 1988-89



Family size = 4, 1 in college, no assets.

Alternative formula simulations: A second illustration of the effect of liberalized Pell eligibility is possible through use of the ACT Simulation Service, a part of ACT's Student Need Analysis Service. This simulation is used here to identify the family income levels that benefited from the liberalized dependent Pell eligibility criteria and to show the magnitude of the increased program costs that resulted from these changes.

Using a random sample of about 12,000 dependent Pell applicants for 1987-88 and two sets of dependent eligibility criteria--original Pell Program and 1988-89 Pell Program--Table 10 and the following figure summarize what happened. The proportion of applicants eligible under original Program criteria was 34.1%. After liberalization, 54.5% of this same applicant population became eligible.

This increase of about 20% in Pell applicant eligibility, however, was not spread evenly across income levels. As shown in the figure, the proportion of applicants that gained eligibility from total parental income levels below $12,000 per year was less that 4%, while the gain was over 50% for those from income levels of $18,000 to $24,000 per year, and 46% for applicants from families with incomes of between $24,000 and $30,000 per year. Even at family incomes of $42,000 to $48,000 per year, the gain in applicant eligibility was greater than it was for those from family incomes of less than $12,000 per year.

The costs added to the Pell Grant Program were similarly concentrated in middle family income ranges. (In 1985, median family income in the U. S. was $27,735 according to the Census Bureau.) Only 9.5% of the increased program costs went to dependent Pell applicants from family incomes below $12,000 per year. Over half of the increased Program costs went to applicants from families with incomes between $18,000 and $30,000. About 15% of the additional program costs were incurred by adding applicant eligibility from family income levels above $30,000 per year.

Effects of 1986 Amendments: The expansion of middle income eligibility for Pell Grants initiated with MISAA in 1978 was continued through the 1986 Amendments. The two principal devices used to assist middle income dependent applicants were the allowance for state and local taxes, and the increase in the multiple student offset. The figures on pages 34 and 35 show the effects of these changes on applicant grant eligibility at a public four year college at different income levels between 1987-88 and 1988-89 for two representative dependent cases.

In the case of a dependent from a family of four with one in college, the Pell Grant for which the applicant was eligible increased by $90 between 1987-88 and 1988-89 for those from family incomes of $10,000 per year or less. The Pell Grant increased by $200 for applicants from family incomes of between $14,000 and $26,000 per year. At $28,000 per year, the Pell Grant increased by $250.

In the similar dependent case, but where two family members were in college, the Pell Grant increased by $90 at a public university for those from incomes below $8,000 per year, by $200 at $16,000 per year, by $500 at $24,000 per year, and by $850 at $32,000 per year. The pattern is clear: the smallest gains in Pell Grant eligibility went to those from lowest incomes, while the largest gains went to those from much higher income levels.

TABLE 10: COMPARISON OF DEPENDENT APPLICANT ELIGIBILITY AND PROGRAM COST
UNDER ORIGINAL 1973-74 TO 1978-79 AND 1988-89 SAI FORMULAS
USING 1987-88 PELL APPLICANT FILE SAMPLE

		ORIGINAL PELL PROGRAM						1988-89 PELL PROGRAM						EFFECTS OF INCREASED PROGRAM ELIGIBILITY	
			ELIGIBLE						ELIGIBLE					INCREASE	INCREASE
TOTAL PARENTS INCOME	SAMPLE	SAI	N	% ELIG	SAI	GRANT	COST	SAI	N	% ELIG	SAI	GRANT	COST	ELIGIBLE	COSTS
0 to $5999	1076	$528	1014	94.2%	$76	$1917	$1,943,838	$243	1056	98.1%	$40	$1951	$2,060,256	3.9%	$116,418
$6000 to $11,999	1304	$576	1209	92.7%	$246	$1783	$2,155,647	$360	1240	95.1%	$120	$1895	$2,349,800	2.4%	$194,153
$12,000 to $17,999	1647	$1552	1227	74.5%	$844	$1237	$1,517,799	$954	1444	87.7%	$501	$1566	$2,261,304	13.2%	$743,505
$18,000 to $23,999	1563	$2123	432	27.6%	$1181	$912	$393,984	$1742	1234	79.0%	$932	$1163	$1,435,142	51.4%	$1,041,158
$24,000 to $29,999	1531	$4368	104	6.8%	$1233	$863	$89,752	$2297	810	52.9%	$1141	$957	$775,170	46.1%	$685,418
$30,000 to $35,999	1352	$5761	30	2.2%	$718	$1368	$41,040	$3145	417	30.8%	$1226	$875	$364,875	28.6%	$323,835
$36,000 to $41,999	1105	$7207	12	1.1%	$73	$2000	$24,000	$4162	183	16.6%	$1346	$752	$137,616	15.5%	$113,616
$42,000 to $47,999	779	$8639	5	.6%	$0	$2082	$10,410	$5185	51	6.5%	$1372	$730	$37,230	5.9%	$26,820
$48,000 to $53,999	553	$9968	3	.5%	$477	$1633	$4,899	$6094	21	3.8%	$1317	$786	$16,506	3.3%	$11,607
$54,000 to $59,999	397	$10710	4	1.0%	$21	$2088	$8,352	$6467	9	2.3%	$852	$1244	$11,196	1.3%	$2,844
$60,000 and over	563	$14867	7	1.2%	$477	$1621	$11,347	$9395	9	1.6%	$407	$1630	$14,670	.4%	$3,323
TOTAL	11870	$4723	4047	34.1%	$513	$1533	$6,204,051	$2751	6474	54.5%	$596	$1462	$9,464,988	20.4%	$3,260,937

Original Pell Program: federal taxes, 20/30 DI assessment rates, and 100/70/50/40 multiple student offsets.

1988-89 Pell Program: federal and state taxes, 11/13/18/25 DI assessment rates, and 100/50/33/25 multiple student offsets/

FIGURE 11

EXPANSION OF PELL GRANT ELIGIBILITY FOR DEPENDENT APPLICANTS

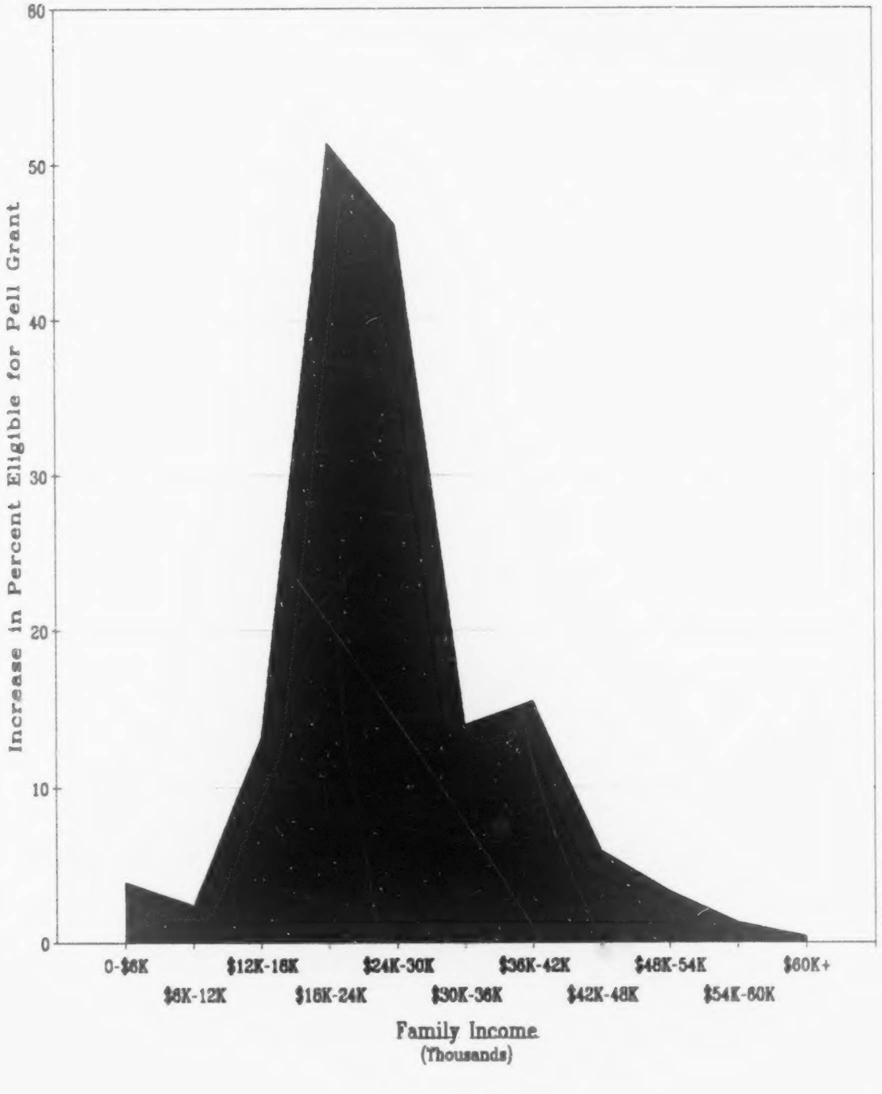


FIGURE 12

CHANGE IN PELL GRANT BETWEEN 1987-88 AND 1988-89
FOR A DEPENDENT APPLICANT, FAMILY OF FOUR, ONE IN COLLEGE
AT A PUBLIC FOUR-YEAR COLLEGE

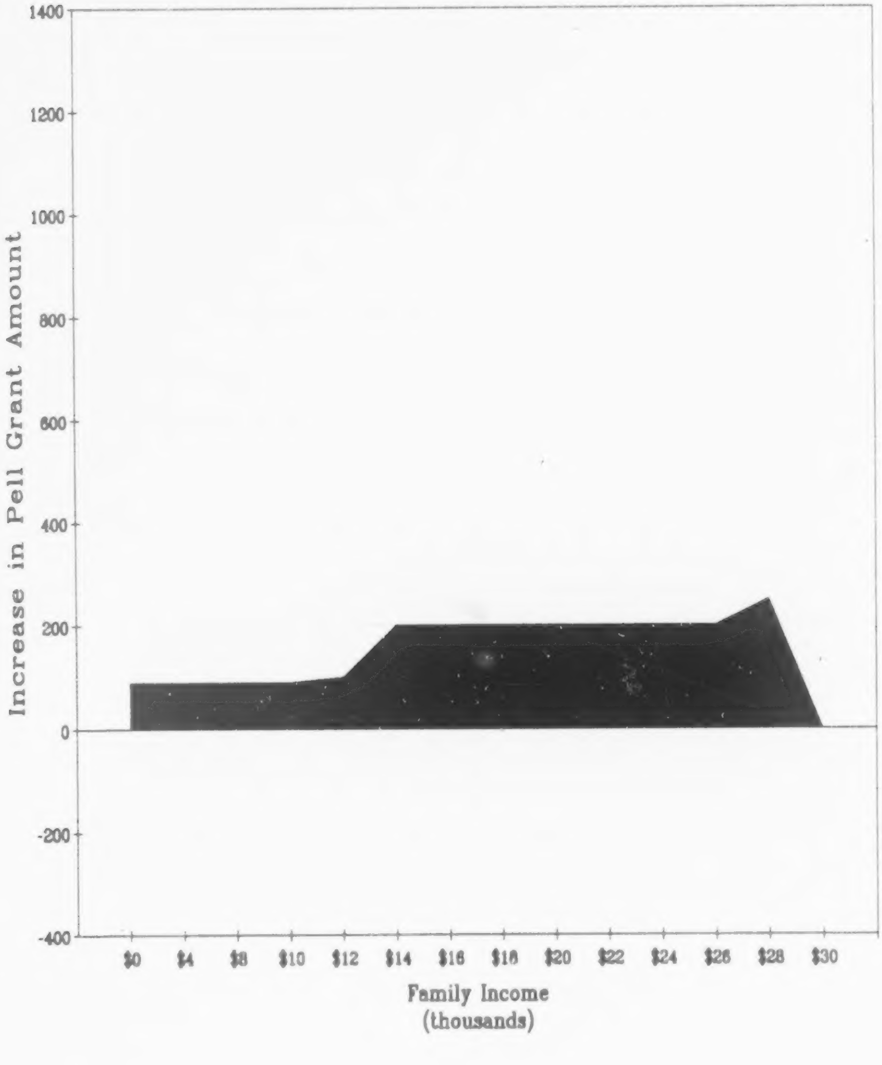
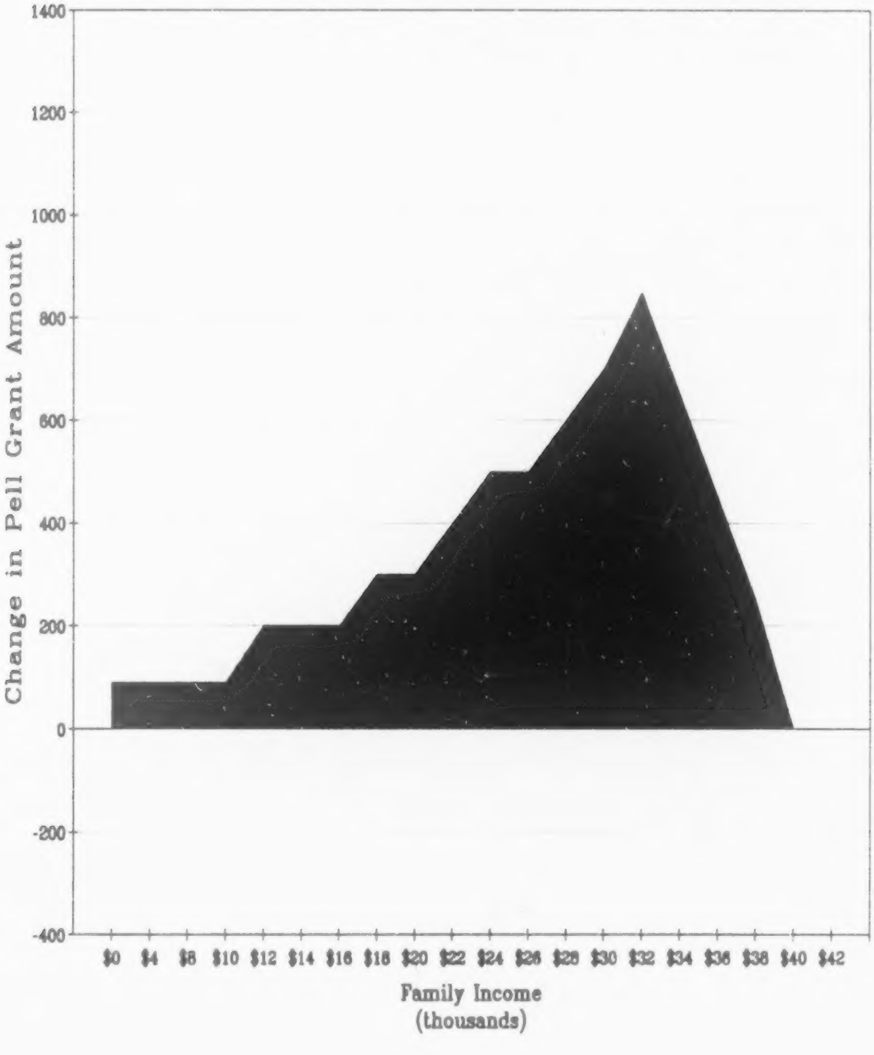


FIGURE 13

CHANGE IN PELL GRANT BETWEEN 1987-88 AND 1988-89
FOR A DEPENDENT APPLICANT, FAMILY OF FOUR, TWO IN COLLEGE
AT A PUBLIC FOUR-YEAR COLLEGE



The Pell Grant maximum award--for those with zero SAIs and therefore without apparent personal means to finance their college attendance costs--has lost purchasing power almost steadily over the life of the Program. For example, a maximum Pell Grant that covered 50% of the costs of attending a public two-year college in 1975-76 now covers 31% of these costs. At a public four-year college the Pell maximum that covered 44% of college attendance costs in 1975-76 now covers 31%. At a private four-year college, the maximum Pell Grant that covered 30% of costs in 1975-76 now covers about 17% of such costs. While the Pell Grant maximum--which only lowest income aid applicants may qualify for--has increased by 50% between 1975-76 and 1987-88, college attendance costs faced by such applicants have increased by 140% to 167%.

The accumulated preceding evidence appears to warrant the following conclusion: In the case of dependent Pell applicants with lowest SAIs, some significant portion of the funds required to maintain the purchasing power of the Pell Grant relative to actual college attendance costs has been reallocated by Congress, first in 1978 and again in 1986, toward applicants with higher SAIs to increase their Pell eligibility.

Independent Gainers and Losers

Congress has made several changes in the standards used to determine eligibility for Pell Grants for independent applicants as well. Because the single term "independent" encompasses many different circumstances, different cases are used here.

Factors affecting eligibility: Generally the changes made to Pell Grant eligibility that have benefited middle income dependent applicants have also benefited independent applicants. These include reductions in assessment rates against discretionary income, allowances for state and local taxes, and multiple student offsets. However, other changes made by Congress have also benefited and sometimes reduced or eliminated independent Pell Grant applicant eligibility since 1973-74. These major changes made by Congress are:

1. Increased family size offset for single independents in 1979-80
2. Change in assessment rate against discretionary income for a married independent applicant without children, first a reduction in 1980-81 and then an increase in 1988-89
3. Reductions in assessment rates for independent applicants with dependents other than spouse first in 1980-81, and again for 1988-89

Single independent financial aid applicants make up about half of the ACT Family Financial Statement independent filing population. Between 1973-74 and 1978-79, the family size offset for the single independent case was about 35% of the federal poverty level. For family sizes greater than one, the family size offset was set at the federal poverty level. In 1979-80, the allowance for single independents was increased to approximately the poverty level, thus protecting income to this higher level from any assessment toward the applicant's SAI.

For married independent Pell applicants without dependents, Congress has changed the assessment rate against discretionary family income twice. The first time, in 1980-81, the rate was reduced from 50% to 25%. Then Congress reversed itself and increased this rate to 75% effective with the 1988-89 academic year. This increase will reduce or eliminate the eligibility of these applicants who have incomes above the family size offset.

Independent applicants with dependents other than spouse have received the benefit of two reductions in the assessment rate against their discretionary family incomes. The original rate of 40% was first reduced to 25% in 1980-81, and then to a progressive rate schedule beginning at 11% for 1988-89. For grant applicants with incomes above the family size offset, these changes have and will increase Pell eligibility substantially.

Alternative formula simulations: The combined effects of these changes plus state and local tax allowances and multiple student offsets on independent Pell applicant eligibility are shown in Table 11. Using the ACT Simulation Service again, two Pell SAI formulas were tested against a random sample of 6,640 1987-88 ACT Family Financial Statement filers. One simulation used the formula to be employed in 1988-89, and the other employed formula criteria that were used during the first five years of the Pell Grant Program. The differences in formulas may be summarized as follows:

	Original Program	1988-89 Program
Family Size Offset:		
Family size is one	$1,800	$5,300
Tax allowance:	federal	federal & state
Discretionary income assessment rates:		
Married with spouse	50%	75%
With dependents	40%	$1-$5K: 11% $5K-$10K: $550+13% $10K-$15K: $1,200+18% $15K+: $2,100+25%
Multiple student offset:	100/70/50/40	100/50/33/25

A bimodal distribution of beneficiaries under these changes results. The largest increase in eligibility for Pell Grants occur in the total student income intervals of $3,000 to $9,000 and $15,000 to $30,000. The largest gain in additional dollars--an increase of 63%--occurred in the $3,000 to $9,000 income range. Again, the lowest income Pell applicants were not the primary beneficiaries of the liberalization in Pell eligibility that occurred after the first six years of the Program.

Effects of 1986 Amendments by income level: Four independent student cases were studied to determine the effects of the 1986 Amendments on Pell applicant eligibility changes between 1987-88 and 1988-89. To assist in the focus of the discussion, changes in Pell eligibility at only a public four-year college are reported here. More results for other kinds of institutions are included in the appendix to this paper.

For a single independent applicant at an income of less than $4,000, the Pell Grant will increase by $90 between 1987-88 and 1988-89. At $6,000 of income, the Pell Grant will increase by $200. At $7,000 and $8,000 of income, the Pell Grant will increase by $300.

TABLE 11: COMPARISON OF INDEPENDENT APPLICANT ELIGIBILITY & PROGRAM COST
UNDER ORIGINAL 1973-74 TO 1978-79 AND 1988-89 SAI FORMULAS
USING 1987-88 PELL APPLICANT FILE SAMPLE

		ORIGINAL PELL PROGRAM						1988-89 PELL PROGRAM						EFFECTS OF INCREASED PROGRAM ELIGIBILITY	
			ELIGIBLE						ELIGIBLE						
TOTAL STUDENTS INCOME	SAMPLE	SAI	N	% ELIG	SAI	GRANT	COST	SAI	N	% ELIG	SAI	GRANT	COST	INCREASE ELIGIBLE	INCREASE COSTS
0 to $2999	1744	$87	1739	99.7%	$74	$1922	$3,342,358	$0	1744	100.0%	$0	$1984	$3,460,096	.3%	$117,738
$3000 to $5999	1199	$1346	756	63.1%	$609	$1408	$1,064,448	$19	1195	99.7%	$3	$1984	$2,370,880	36.6%	$1,306,432
$6000 to $8999	1002	$2241	451	45.0%	$108	$1878	$846,978	$464	988	98.6%	$431	$1603	$1,583,764	53.6%	$736,786
$9000 to $11,999	753	$2936	409	54.3%	$520	$1515	$619,635	$1318	453	60.2%	$390	$1632	$739,296	5.9%	$119,661
$12,000 to $14,999	549	$3465	270	49.2%	$955	$1110	$299,700	$1931	303	55.2%	$317	$1700	$515,100	6.0%	$215,400
$15,000 to $17,999	373	$4121	96	25.7%	$1155	$917	$88,032	$2601	209	56.0%	$450	$1622	$338,998	30.3%	$250,966
$18,000 to $20,999	265	$4282	39	14.7%	$1225	$850	$33,150	$3077	158	59.6%	$617	$1464	$231,312	44.9%	$198,162
$21,000 to $23,999	222	$5215	9	4.1%	$948	$1139	$10,251	$3489	143	64.4%	$916	$1177	$168,311	60.3%	$158,060
$24,000 to $26,999	167	$5344	4	2.4%	$771	$1325	$5,300	$3686	110	65.9%	$1168	$927	$101,970	63.5%	$96,670
$27,000 to $29,999	104	$6513	2	1.9%	$0	$2085	$4,170	$4543	49	47.1%	$1248	$850	$41,650	45.2%	$37,480
$30,000 and over	262	$20129	5	1.9%	$0	$2070	$10,350	$16108	43	16.4%	$1197	$897	$38,571	14.5%	$28,221
TOTAL	6640	$2831	3780	56.9%	$338	$1673	$6,323,940	$1568	5395	81.3%	$235	$1777	$9,586,915	24.4%	$3,262,975

Original Pell Program: federal tax allowance, 100/70/50/40 multiple student offset, $1800 single student family size offset, and DI rates of 50% for married and 40% if dependents other than spouse.

1988-89 Pell Program: federal and state tax allowance, 100/50/33/25 multiple student offsets, $5300 single student family size offset, and DI rates of 75% for married and 11%/13%/18%/25% if with dependents.

FIGURE 14

EXPANSION OF PELL GRANT ELIGIBILITY FOR INDEPENDENT APPLICANTS

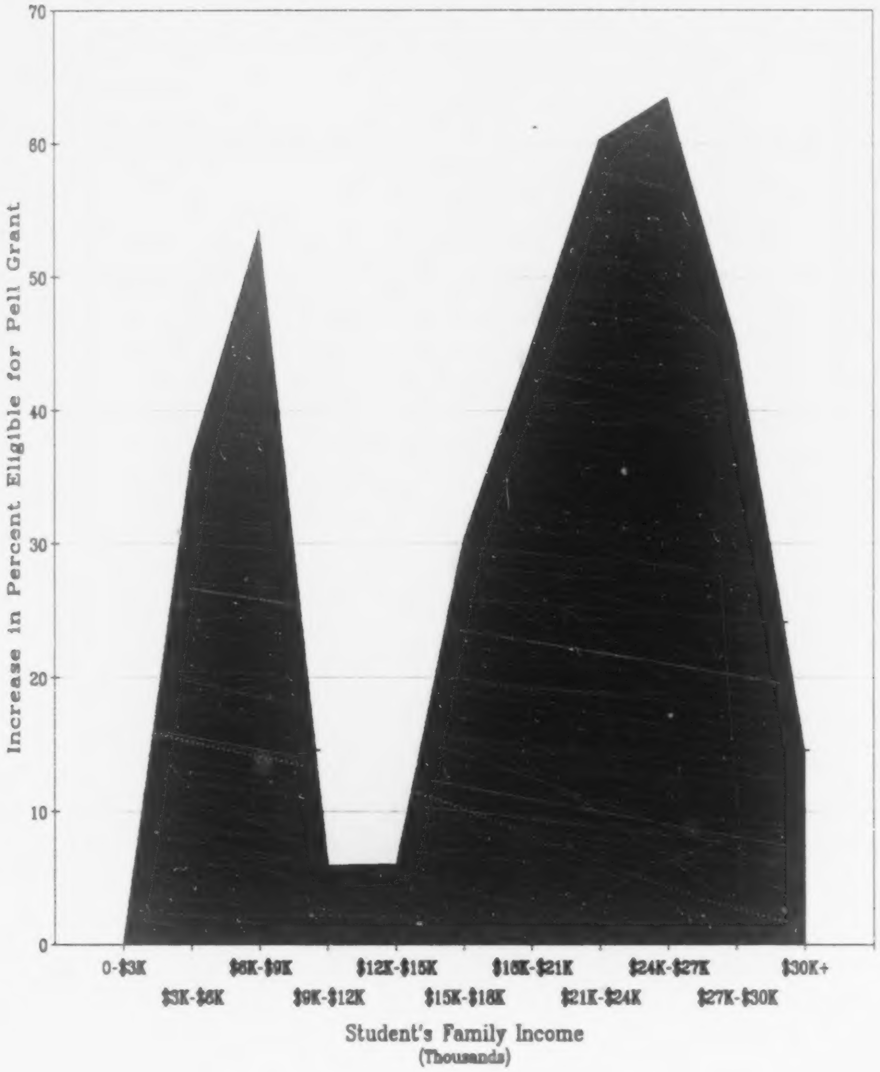
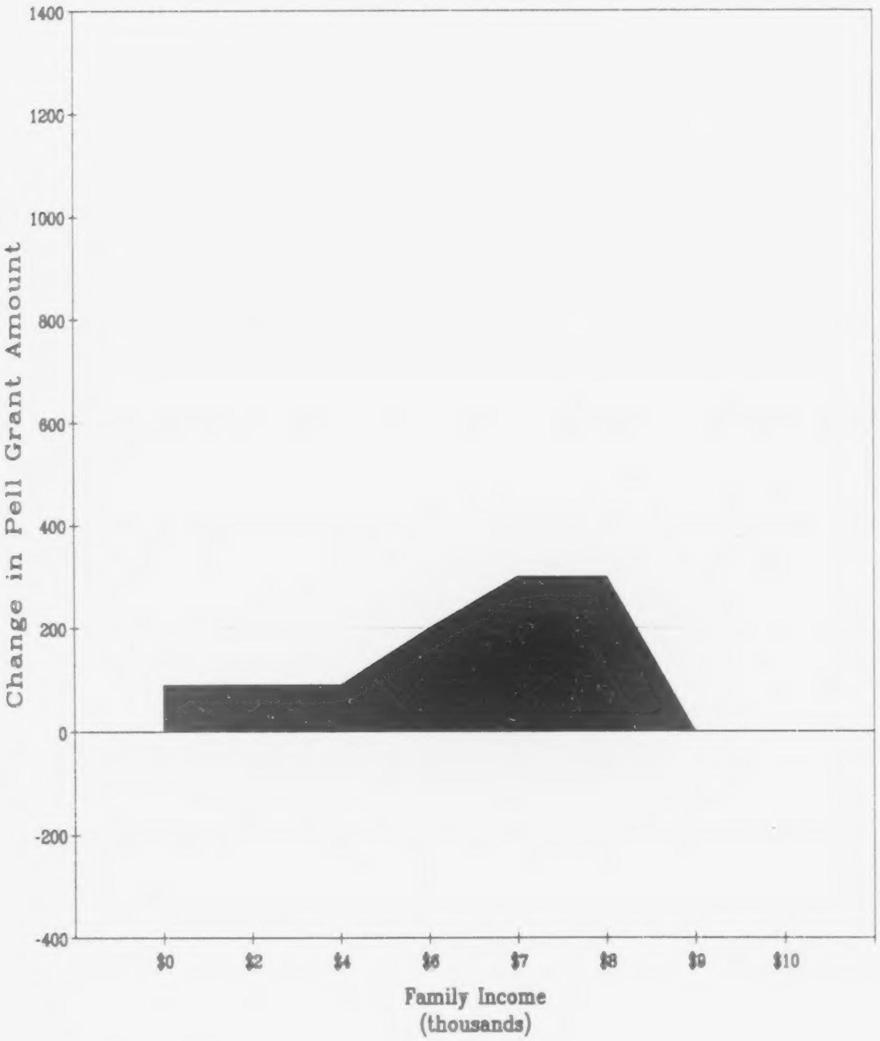


FIGURE 15

CHANGE IN PELL GRANT BETWEEN 1987-88 AND 1988-89
FOR A SINGLE INDEPENDENT APPLICANT
AT A PUBLIC FOUR-YEAR COLLEGE



For an unmarried independent applicant with a dependent, Pell Grants at a public four-year college will increase by $100 between 1987-88 and 1988-89 from income levels through about $8,000. Above that income, increases will be greater. At $10,000 Pell Grants will increase by $400. At $14,000 they will increase by $800. At $18,000 they will increase by $1,350. Increases will be greater than the $100 increase to be experienced by zero SAIs for all income levels up through $26,000 per year.

For married independents without other dependents, the increase in discretionary income assessment rates from 25% to 75% will reduce or eliminate many previously eligible Pell applicants. Only the lowest income eligible applicants will see increases. Up to about $7,000 in income, Grants will increase by $90 to $100. However, above that level or the amount protected by the family size offset plus tax allowances, grants will decrease. At $8,000 Grants will decrease by $200. At $10,000 they will decrease by $1,100, and at $11,000 Grants will decrease by $1,150. In fact, whereas married independent applicants were eligible for Pell Grants up through about $15,000 of income in 1987-88, they will be eligible for minimum awards only up to about $10,000 in 1988-89.

If, however, the married independent Pell applicants have a dependent, the reduction in discretionary income assessment rates will actually expand the eligibility for grants in 1988-89. Up to about $8,000 in family income Pell Grants will increase by $90. At $12,000 they will increase by $600. By $18,000 they will increase by $1,250. The upper income limit for a minimum Pell Grant will increase from about $16,000 in 1987-88 to about $26,000 in 1988-89.

With the exception of the married independent applicants without dependents, the evidence again appears to justify the following conclusion: In the case of independent Pell applicants with lowest SAIs, some significant portion of the funds required to maintain the purchasing power of the Pell Grant relative to actual college attendance costs has been reallocated by Congress, first in 1978 and again in 1986, toward applicants with higher SAIs to increase their Pell eligibility. The exception, of course, is the substantially reduced Pell Grant eligibility for married independents without dependents who have incomes above the level protected by the family size offset and tax allowances.

With only one exception, changes to dependent and independent Pell applicant eligibility have been in the direction of expanded eligibility and Program cost. Under the restriction of limited Program funding, this expanded eligibility has been financed partly by lack of growth in the maximum Pell Grant provided for those with zero SAIs.

The changes made to the original Basic Educational Opportunity Grant Program by the Middle Income Student Assistance Act of 1978 and the 1986 Amendments have clearly and quite consistently shifted its focus. Congress has decided, for both dependent and independent Pell Grant applicants, to expand eligibility to additional classes of previously ineligible applicants while increasing grants to others previously eligible without funding adequate to match college attendance cost increases.

FIGURE 16

CHANGE IN PELL GRANT BETWEEN 1987-88 AND 1988-89
FOR AN UNMARRIED INDEPENDENT WITH CHILD
AT A PUBLIC FOUR-YEAR COLLEGE

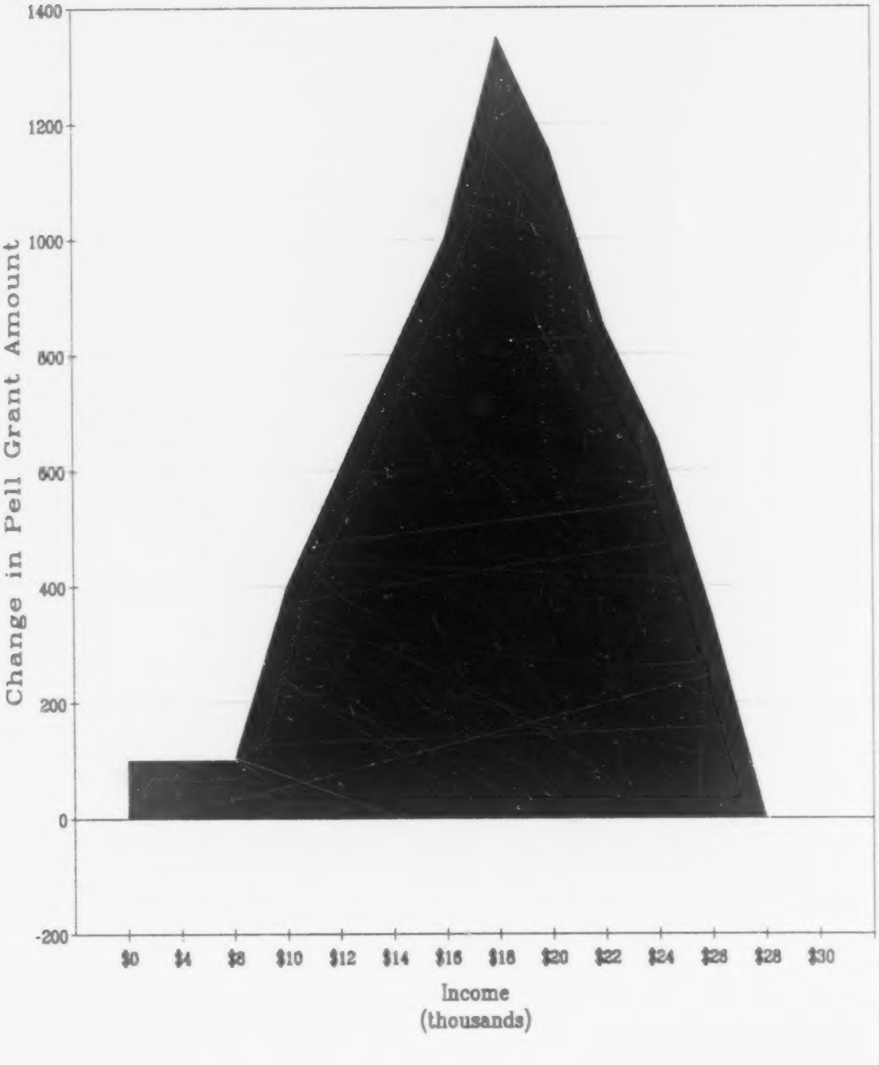


FIGURE 17

CHANGE IN PELL GRANT BETWEEN 1987-88 AND 1988-89
FOR A MARRIED INDEPENDENT APPLICANT, ONE IN COLLEGE,
AT A PUBLIC FOUR-YEAR COLLEGE

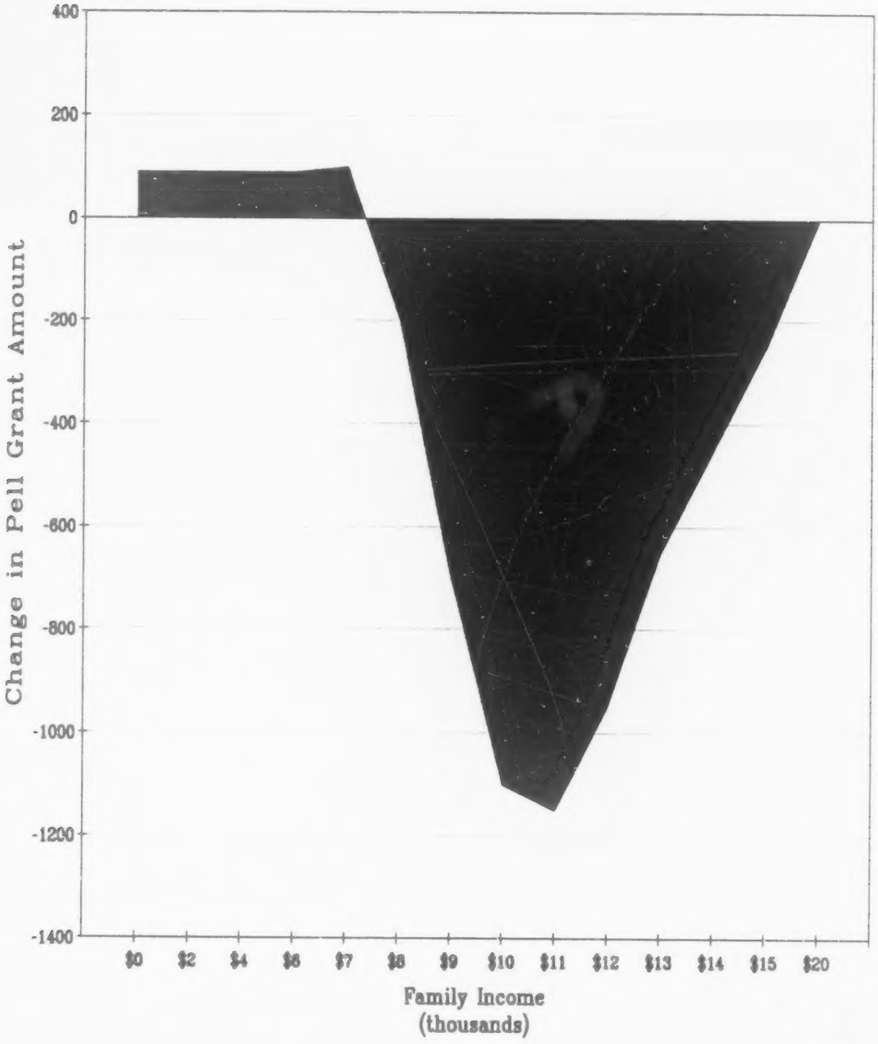
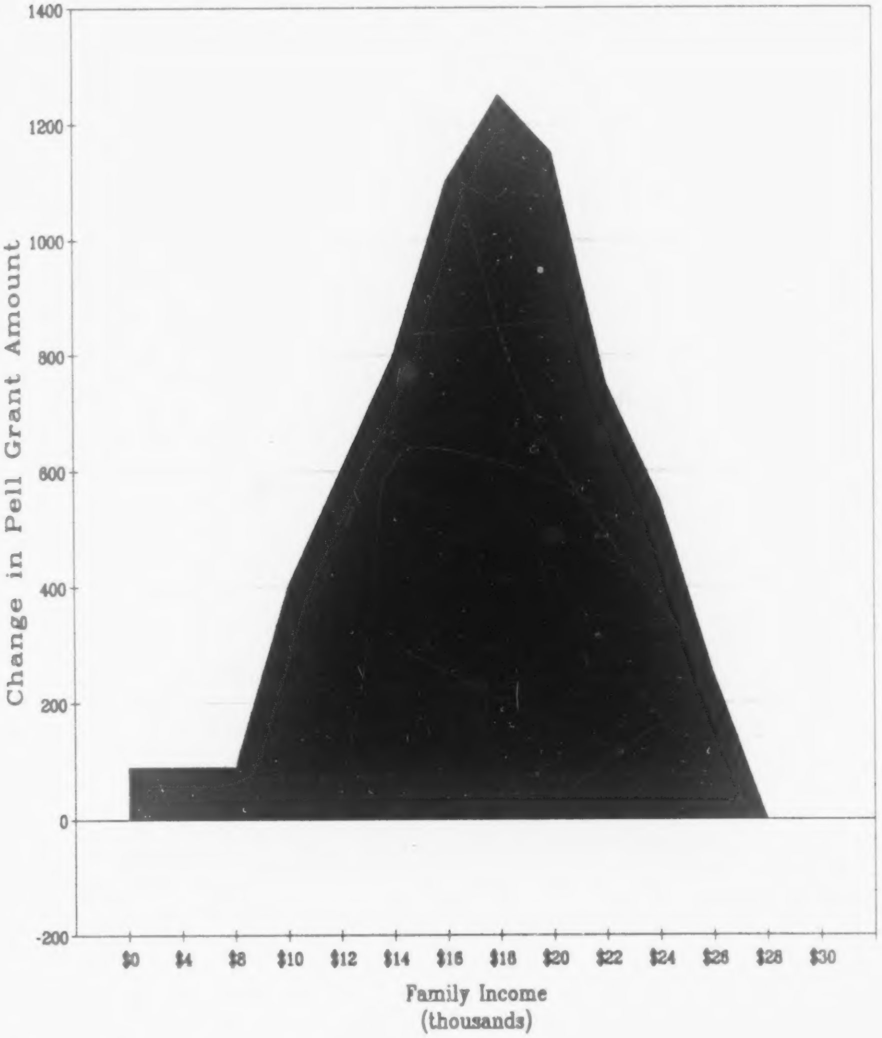


FIGURE 18

CHANGE IN PELL GRANT BETWEEN 1987-88 AND 1988-89
FOR A MARRIED INDEPENDENT APPLICANT, WITH ONE CHILD, ONE IN COLLEGE,
AT A PUBLIC FOUR-YEAR COLLEGE



Under the constraint of limited funding, these additions have been partially financed through lack of growth in the maximum Pell Grant for the lowest SAI applicants. Although the maximum Pell Grant is authorized for annual increases under the 1986 Amendments, available funding will be largely used to create or expand eligibility for applicants other than those from lowest family resource levels.

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APPENDIX TABLES

TABLE A-1

Pell Grant Program Summary Data
1973-74 to 1987-88

Award Year	Official Applicants	Complete Applicants	Compl /Offl	Eligible Applicants	Elig/ Compl	Paid Recipients	Paid/ Elig	Dollars Paid (000)	Mean Grant
73-74	512,866	482,331	94.0%	268,444	55.7%	176,000	65.6%	$ 47,054	$ 267
74-75	1,304,877	1,114,084	85.4	681,648	61.2	553,653	81.2	349,544	631
75-76	2,339,337	2,178,696	93.1	1,455,187	66.8	1,220,744	83.9	912,115	747
76-77	3,590,379	3,426,504	95.4	2,262,348	66.0	1,948,329	86.1	1,451,126	745
77-78	3,844,047	3,668,837	95.4	2,416,865	65.9	2,028,208	83.9	1,511,916	745
78-79	3,885,393	3,401,428	87.5	2,228,603	65.5	1,914,673	85.8	1,540,788	805
79-80	4,186,716	3,868,429	92.4	3,029,745	78.3	2,717,913	89.7	2,358,689	868
80-81	4,825,420	4,475,762	92.8	3,330,534	74.4	2,845,870	85.4	2,388,750	839
81-82	4,945,760	4,614,590	93.3	3,398,237	73.6	2,784,463	81.9	2,297,421	825
82-83	5,118,558	4,709,225	92.0	3,341,371	71.0	2,612,571	78.2	2,417,811	925
83-84	5,453,548	4,955,775	90.9	3,541,191	71.5	2,848,587	79.4	2,792,117	980
84-85	5,514,029	4,981,357	90.3	3,558,386	71.4	2,833,345	79.6	3,035,191	1,071
85-86	5,627,131	5,205,492	92.5	3,710,933	71.3	2,910,174	78.4	3,572,006	1,227
86-87	5,834,277	5,518,529	94.6	3,759,324	68.1	2,763,408	73.5	3,398,795	1,230
87-88p	6,000,000			3,600,000		2,310,186	64.2	3,287,689	1,423
Total	62,982,338	58,101,039	92.2	40,582,816	69.8	32,468,124	80.0	$31,361,011	$ 966

p: preliminary and estimates.
Source: Office of Student Financial Assistance, U. S. Department of Education
Official Applications: Duplicated applications have been removed from total received.
Complete Applications: Sufficient information provided for the calculation of an SAI.
Eligible Applications: SAI is at or blow cutoff as shown in Table 9.
Paid Recipients: Dollars were claimed for eligible applicant.

TABLE A-2: ESTIMATED AVERAGE UNDERGRADUATE COLLEGE ATTENDANCE COSTS
BY CONTROL AND LEVEL OF INSTITUTION, 1973-74 TO 1988-89

	Academic/Award Year															
	73-74	74-75	75-76	76-77	77-78	78-79	79-80	80-81	81-82	82-83	83-84	84-85	85-86	86-87	87-88	88-89
A. PUBLIC INSTITUTIONS																
1. 2 Year Colleges:																
Tuition & Fees (a)	$274	$277	$245	$283	$306	$327	$355	$385	$432	$473	$528	$584	$620	$650		
Books & Supplies (c)					$200	$210	$227	$272	$270	$288	$312	$336	$360	$384	$384	
Food & Housing (c)					$2,025	$2,124	$2,295	$2,547	$2,925	$3,150	$3,330	$3,546	$3,771	$4,014	$4,140	
Transportation (c)					$360	$378	$405	$630	$540	$585	$585	$630	$675	$684	$576	
Personal/Misc (c)					$540	$567	$612	$675	$855	$990	$990	$1,116	$1,134	$1,230	$1,332	
Total Budget	$2,527	$2,653	$2,785	$2,925	$3,071	$3,228	$3,489	$3,879	$4,482	$4,901	$5,160	$5,582	$5,885	$6,278	$6,694	$7,138
2. 4 Year Colleges:																
Tuition & Fees (a)	$463	$448	$469	$564	$536	$622	$662	$721	$813	$936	$1,052	$1,117	$1,200	$1,270		
Books & Supplies (b)	$141	$170	$163	$189	$196	$202	$211	$225	$250	$263	$300	$313	$329	$358	$376	
Room & Board (a)	$1,043	$1,110	$1,188	$1,264	$1,336	$1,405	$1,536	$1,699	$1,888	$2,096	$2,233	$2,401	$2,550	$2,670		
Other Costs (c)	$872	$968	$1,057	$1,118	$1,189	$1,280	$1,426	$1,619	$1,785	$1,891	$1,948	$2,016	$2,088	$2,120	$2,216	
Total Budget	$2,519	$2,696	$2,877	$3,135	$3,317	$3,509	$3,835	$4,264	$4,736	$5,196	$5,533	$5,847	$6,167	$6,418	$6,732	$7,064
3. Universities:																
Tuition & Fees	$581	$599	$642	$689	$736	$777	$840	$915	$1,042	$1,164	$1,284	$1,386	$1,510	$1,590		
Books & Supplies	$153	$170	$163	$180	$190	$199	$212	$228	$250	$271	$308	$342	$380	$353	$381	
Room & Board	$1,126	$1,161	$1,293	$1,377	$1,434	$1,512	$1,647	$1,796	$2,037	$2,239	$2,344	$2,513	$2,660	$2,780		
Other Costs	$872	$968	$1,057	$1,118	$1,189	$1,280	$1,426	$1,619	$1,785	$1,891	$1,948	$2,016	$2,088	$2,120	$2,216	
Total Budget	$2,732	$2,898	$3,155	$3,364	$3,549	$3,768	$4,125	$4,558	$5,114	$5,565	$5,884	$6,257	$6,638	$6,843	$7,054	$7,272
B. PRIVATE INSTITUTIONS																
1. 2 Year Colleges:																
Tuition & Fees	$1,303	$1,367	$1,427	$1,592	$1,706	$1,831	$2,062	$2,413	$2,697	$3,008	$3,099	$3,485	$3,760	$4,060		
Books & Supplies	$143	$158	$163	$175	$183	$196	$212	$234	$258	$299	$304	$342	$339	$369	$387	
Room & Board	$1,107	$1,224	$1,284	$1,379	$1,442	$1,558	$1,693	$1,877	$2,143	$2,356	$2,472	$2,718	$2,870	$3,000		
Other Costs	$872	$968	$1,057	$1,118	$1,189	$1,280	$1,426	$1,619	$1,785	$1,891	$1,948	$2,016	$2,088	$2,120	$2,216	
Total Budget	$3,425	$3,717	$3,931	$4,264	$4,520	$4,865	$5,393	$6,143	$6,883	$7,554	$7,823	$8,561	$9,057	$9,549	$10,068	$10,615
2. 4 Year Colleges:																
Tuition & Fees	$1,925	$1,954	$2,084	$2,351	$2,520	$2,771	$3,020	$3,390	$3,855	$4,329	$4,726	$5,135	$5,550	$6,000		
Books & Supplies	$147	$165	$171	$183	$191	$202	$214	$231	$258	$263	$292	$319	$326	$349	$395	
Room & Board	$1,115	$1,202	$1,301	$1,363	$1,448	$1,555	$1,679	$1,859	$2,094	$2,317	$2,518	$2,714	$2,950	$3,070		
Other Costs	$872	$968	$1,057	$1,118	$1,189	$1,280	$1,426	$1,619	$1,785	$1,891	$1,948	$2,016	$2,088	$2,120	$2,216	
Total Budget	$4,059	$4,289	$4,613	$5,015	$5,348	$5,808	$6,339	$7,099	$7,992	$8,800	$9,484	$10,184	$10,914	$11,539	$12,292	$13,102
3. Universities:																
Tuition & Fees	$2,375	$2,614	$2,881	$3,051	$3,240	$3,487	$3,811	$4,275	$4,887	$5,583	$6,217	$6,843	$7,450	$8,060		
Books & Supplies	$153	$165	$171	$179	$187	$197	$211	$230	$258	$269	$312	$343	$376	$384	$414	
Room & Board	$1,342	$1,462	$1,586	$1,665	$1,793	$1,916	$2,077	$2,291	$2,552	$2,954	$3,090	$3,400	$3,660	$3,810		
Other Costs	$872	$968	$1,057	$1,118	$1,189	$1,280	$1,426	$1,619	$1,785	$1,891	$1,948	$2,016	$2,088	$2,120	$2,216	
Total Budget	$4,742	$5,209	$5,695	$6,013	$6,409	$6,880	$7,525	$8,415	$9,482	$10,697	$11,567	$12,602	$13,574	$14,374	$15,221	$16,118

(a) Source: Center of Education Statistics, U.S. Dept. of Education
(b) Source: ACT Budget Survey Questionnaire
(c) Source: California Student Aid Commission

TABLE A-3

D1: SAI FOR A DEPENDENT PELL APPLICANT FROM POVERTY LEVEL FAMILY INCOME
FAMILY SIZE = 4, 1 IN COLLEGE, 1973-74 TO 1988-89

Academic/Award Year	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89
Base/Income Year	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
Family Income	$4,275	$4,540	$5,038	$5,500	$5,815	$6,191	$6,662	$7,412	$8,414	$9,287	$9,862	$10,178	$10,609	$10,989	$11,200	$11,536
Family Size Offset	$4,300	$4,650	$5,200	$5,600	$5,900	$6,300	$6,850	$7,700	$7,700	$8,400	$9,000	$9,300	$9,600	$9,900	$10,100	$10,400
Federal Taxes:																
Exempt/St Deduct	$3,000	$3,000	$3,000	$3,000	$3,000	$5,100				$4,000	$4,000	$4,000	$4,000	$4,160	$4,320	$7,600
Taxable Income	$1,575	$1,540	$2,038	$2,500	$2,815	$1,091				$5,287	$5,862	$6,178	$6,609	$6,829	$6,880	$3,936
Taxes	$0	$32	$102	$81	$100	$0	$0	$4	$144	$259	$305	$319	$366	$372	$362	$19
Fed Tax Effort	.00%	.70%	2.02%	1.47%	1.72%	.00%	.00%	.05%	1.71%	2.79%	3.09%	3.13%	3.45%	3.39%	3.23%	.16%
State Taxes																$923
Total Allowances	$4,300	$4,682	$5,302	$5,681	$6,000	$6,300	$6,850	$7,704	$7,844	$8,659	$9,305	$9,619	$9,966	$10,272	$10,462	$11,342
Allowance % Inc	100.6%	103.1%	105.2%	103.3%	103.2%	101.8%	102.8%	103.9%	93.2%	93.2%	94.4%	94.5%	93.9%	93.5%	93.4%	98.3%
Discretionary Income	-$25	-$142	-$264	-$181	-$185	-$109	-$188	-$292	$570	$628	$557	$559	$643	$717	$738	$194
Family SEI/SAI	$0	$0	$0	$0	$0	$0	$0	$0	$60	$69	$61	$61	$71	$79	$81	$21
FSAI % Income	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.7%	.7%	.6%	.6%	.7%	.7%	.7%	.2%
Student SEI/SAI	$0	$0	$0	$0	$0	$0	$0	$0	$60	$69	$61	$61	$71	$79	$81	$21
SAI % Income	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.7%	.7%	.6%	.6%	.7%	.7%	.7%	.2%

TABLE A-4

D2: SAI FOR A DEPENDENT PELL APPLICANT FROM BLS LOWER BUDGET FAMILY INCOME, FAMILY SIZE = 4, 1 IN COLLEGE, 1973-74 TO 1988-89

Academic/Award Year	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89
Base/Income Year	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
Family Income	$7,386	$8,181	$9,198	$9,588	$10,041	$10,481	$11,546	$12,585	$14,044	$15,323	$16,262	$16,786	$17,500	$18,124	$18,473	$19,027
Family Size Offset	$4,300	$4,650	$5,200	$5,600	$5,900	$6,300	$6,850	$7,700	$7,700	$8,400	$9,000	$9,300	$9,600	$9,900	$10,100	$10,400
Federal Taxes:																
Exempt/St Deduct	$4,107				$5,100					$4,000	$4,000	$4,000	$4,000	$4,160	$4,320	$11,360
Taxable Income	$3,279				$4,941					$11,323	$12,262	$12,786	$13,500	$13,964	$14,153	$7,843
Taxes	$463	$599	$772	$748	$796	$532	$732	$806	$1,067	$1,284	$1,305	$1,298	$1,337	$1,383	$1,384	$1,056
Fed Tax Effort	6.27%	7.32%	8.39%	7.80%	7.93%	5.08%	6.34%	6.40%	7.60%	8.38%	8.02%	7.73%	7.64%	7.63%	7.49%	5.55%
State Taxes																$923
Total Allowances	$4,763	$5,249	$5,972	$6,348	$6,696	$6,832	$7,582	$8,506	$8,767	$9,684	$10,305	$10,598	$10,937	$11,283	$11,484	$12,379
Allowance % Inc	64.5%	64.2%	64.9%	66.2%	66.7%	65.2%	65.7%	67.6%	62.4%	63.2%	63.4%	63.1%	62.5%	62.3%	62.2%	65.1%
Discretionary Income	$2,623	$2,932	$3,226	$3,240	$3,345	$3,649	$3,964	$4,079	$5,277	$5,639	$5,957	$6,188	$6,563	$6,841	$6,989	$6,648
Family SEI/SAI	$525	$586	$645	$648	$669	$730	$416	$428	$554	$633	$674	$704	$753	$789	$809	$686
FSAI % Income	7.1%	7.2%	7.0%	6.8%	6.7%	7.0%	3.6%	3.4%	3.9%	4.1%	4.1%	4.2%	4.3%	4.4%	4.4%	3.6%
Student SEI/SAI	$525	$586	$645	$648	$669	$730	$416	$428	$554	$633	$674	$704	$753	$789	$809	$686
SAI % Income	7.1%	7.2%	7.0%	6.8%	6.7%	7.0%	3.6%	3.4%	3.9%	4.1%	4.1%	4.2%	4.3%	4.4%	4.4%	3.6%

TABLE A-5

D3: SAI FOR A DEPENDENT PELL APPLICANT FROM BLS INTERMEDIATE BUDGET FAMILY INCOME, FAMILY SIZE = 4, 1 IN COLLEGE, 1973-74 TO 1988-89

Academic/Award Year	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89
Base/Income Year -	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
Family Income	$11,446	$12,626	$14,333	$15,318	$16,236	$17,106	$18,622	$20,517	$23,134	$25,407	$26,965	$27,832	$29,017	$30,052	$30,630	$31,546
Family Size Offset	$4,300	$4,650	$5,200	$5,600	$5,900	$6,300	$6,850	$7,700	$7,700	$8,400	$9,000	$9,300	$9,600	$9,900	$10,100	$10,400
Federal Taxes:																
Exempt/St Deduct	$4,717	$4,894	$5,000	$5,451	$5,598					$4,000	$4,000	$4,000	$4,000	$4,160	$4,320	$11,360
Taxable Income	$6,729	$7,732	$9,333	$9,867	$10,630					$21,407	$22,965	$23,832	$25,017	$25,892	$26,310	$20,189
Taxes	$1,139	$1,329	$1,673	$1,791	$1,958	$1,844	$2,186	$2,391	$3,015	$3,571	$3,631	$3,478	$3,571	$3,674	$3,690	$2,908
Fed Tax Effort	9.95%	10.53%	11.67%	11.69%	12.06%	10.78%	11.74%	11.65%	13.03%	14.06%	13.47%	12.50%	12.31%	12.23%	12.05%	9.22%
State Taxes																$2,523
Total Allowances	$5,439	$5,979	$6,873	$7,391	$7,858	$8,144	$9,036	$10,091	$10,715	$11,971	$12,631	$12,778	$13,171	$13,574	$13,790	$15,831
Allowance % Inc	47.5%	47.4%	48.0%	48.3%	48.4%	47.6%	48.5%	49.2%	46.3%	47.1%	46.8%	45.9%	45.4%	45.2%	45.0%	50.2%
Discretionary Income	$6,007	$6,647	$7,460	$7,927	$8,378	$8,962	$9,586	$10,426	$12,419	$13,436	$14,334	$15,054	$15,846	$16,478	$16,840	$15,715
Family SEI/SAI	$1,302	$1,494	$1,738	$1,878	$2,013	$2,189	$1,007	$1,095	$1,304	$1,818	$1,980	$2,114	$2,312	$2,470	$2,560	$2,279
FSAI % Income	11.4%	11.8%	12.1%	12.3%	12.4%	12.8%	5.4%	5.3%	5.6%	7.2%	7.3%	7.6%	8.0%	8.2%	8.4%	7.2%
Student SEI/SAI	$1,302	$1,494	$1,738	$1,878	$2,013	$2,189	$1,007	$1,095	$1,304	$1,818	$1,980	$2,114	$2,312	$2,470	$2,560	$2,279
SAI % Income	11.4%	11.8%	12.1%	12.3%	12.4%	12.8%	5.4%	5.3%	5.6%	7.2%	7.3%	7.6%	8.0%	8.2%	8.4%	7.2%

TABLE A-6

D4: SAI FOR A DEPENDENT PELL APPLICANT FROM BLS INTERMEDIATE BUDGET
FAMILY INCOME, FAMILY SIZE = 4, 2 IN COLLEGE, 1973-74 TO 1988-89

Academic/Award Year Base/Income Year	1973-74 1972	1974-75 1973	1975-76 1974	1976-77 1975	1977-78 1976	1978-79 1977	1979-80 1978	1980-81 1979	1981-82 1980	1982-83 1981	1983-84 1982	1984-85 1983	1985-86 1984	1986-87 1985	1987-88 1986	1988-89 1987
Family Income	$11,446	$12,626	$14,333	$15,318	$16,236	$17,106	$18,622	$20,517	$23,134	$25,407	$26,965	$27,832	$29,017	$30,052	$30,630	$31,546
Family Size Offset	$4,300	$4,650	$5,200	$5,600	$5,900	$6,300	$6,850	$7,700	$7,700	$8,400	$9,000	$9,300	$9,600	$9,900	$10,100	$10,400
Federal Taxes:																
Exempt/St Deduct	$4,717	$4,894	$5,000	$5,451	$5,598					$4,000	$4,000	$4,000	$4,000	$4,160	$4,320	$11,360
Taxable Income	$6,729	$7,732	$9,333	$9,867	$10,630					$21,407	$22,965	$23,832	$25,017	$25,892	$26,310	$20,189
Taxes	$1,139	$1,329	$1,673	$1,791	$1,958	$1,844	$2,186	$2,391	$3,015	$3,571	$3,631	$3,478	$3,571	$3,674	$3,690	$2,908
Fed Tax Effort	9.95%	10.53%	11.67%	11.69%	12.06%	10.78%	11.74%	11.65%	13.03%	14.06%	13.47%	12.50%	12.31%	12.23%	12.05%	9.22%
State Taxes																$2,523
Total Allowances	$5,439	$5,979	$6,873	$7,391	$7,858	$8,144	$9,036	$10,091	$10,715	$11,971	$12,631	$12,778	$13,171	$13,574	$13,790	$15,831
Allowance % Inc	47.5%	47.4%	48.0%	48.3%	48.4%	47.6%	48.5%	49.2%	46.3%	47.1%	46.8%	45.9%	45.4%	45.2%	45.0%	50.2%
Discretionary Income	$6,007	$6,647	$7,460	$7,927	$8,378	$8,962	$9,586	$10,426	$12,419	$13,436	$14,334	$15,054	$15,846	$16,478	$16,840	$15,715
Family SEI/SAI	$1,302	$1,494	$1,738	$1,878	$2,013	$2,189	$1,007	$1,095	$1,304	$1,818	$1,980	$2,114	$2,312	$2,470	$2,560	$2,279
FSAI % Income	11.4%	11.8%	12.1%	12.3%	12.4%	12.8%	5.4%	5.3%	5.6%	7.2%	7.3%	7.6%	8.0%	8.2%	8.4%	7.2%
Student SEI/SAI	$911	$1,046	$1,217	$1,315	$1,409	$1,532	$705	$767	$913	$1,273	$1,386	$1,480	$1,618	$1,729	$1,792	$1,140
SAI % Income	8.0%	8.3%	8.5%	8.6%	8.7%	9.0%	3.8%	3.7%	3.9%	5.0%	5.1%	5.3%	5.6%	5.8%	5.9%	3.6%

TABLE A-7: DEPENDENT PELL GRANT APPLICANT ELIGIBILITY
FOR FOUR DEPENDENT CASES, 1973-74 TO 1988-89

		Academic Year															
		73-74	74-75	75-76	76-77	77-78	78-79	79-80	80-81	81-82	82-83	83-84	84-85	85-86	86-87	87-88	88-89
AVERAGE COLLEGE COSTS(a)																	
Public 2 Year - Off Campus		$2,527	$2,653	$2,785	$2,925	$3,071	$3,228	$3,489	$3,879	$4,482	$4,901	$5,160	$5,582	$5,885	$6,278	$6,694	$7,138
Public 4 Year - On Campus		$2,519	$2,696	$2,877	$3,135	$3,317	$3,509	$3,835	$4,264	$4,736	$5,186	$5,533	$5,847	$6,167	$6,418	$6,732	$7,064
Private 4 Year - On Campus		$4,059	$4,289	$4,613	$5,015	$5,348	$5,808	$6,339	$7,099	$7,992	$8,800	$9,484	$10,184	$10,914	$11,539	$12,292	$13,102
D1:POVERTY LEVEL FAMILY INCOME(b)		$4,275	$4,540	$5,038	$5,500	$5,815	$6,191	$6,662	$7,412	$8,414	$9,287	$9,862	$10,178	$10,609	$10,989	$11,200	$11,536
Family SEI/SAI		$0	$0	$0	$0	$0	$0	$0	$0	$60	$69	$61	$61	$71	$79	$81	$21
Family SEI/SAI Effort		.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.7%	.7%	.6%	.6%	.7%	.7%	.7%	.2%
Public 2 Year	Pell Grant	$452	$888	$862	$888	$912	$912	$938	$938	$882	$988	$1,013	$1,275	$1,590	$1,590	$1,590	$1,770
	PG % Costs	17.9%	33.5%	31.0%	30.4%	29.7%	28.3%	26.9%	24.2%	19.7%	20.2%	19.6%	22.8%	27.0%	25.3%	23.8%	24.8%
	Met Need	$452	$888	$862	$888	$912	$912	$938	$938	$942	$1,057	$1,074	$1,336	$1,661	$1,669	$1,671	$1,791
	MN % Costs	17.9%	33.5%	31.0%	30.4%	29.7%	28.3%	26.9%	24.2%	21.0%	21.6%	20.8%	23.9%	28.2%	26.6%	25.0%	25.1%
	Unmet Need	$2,075	$1,765	$1,923	$2,037	$2,159	$2,316	$2,551	$2,941	$3,540	$3,844	$4,086	$4,246	$4,224	$4,609	$5,023	$5,347
	UN % Costs	82.1%	66.5%	69.0%	69.6%	70.3%	71.7%	73.1%	75.8%	79.0%	78.4%	79.2%	76.1%	71.8%	73.4%	75.0%	74.9%
	UN % Income	48.5%	38.9%	38.2%	37.0%	37.1%	37.4%	38.3%	39.7%	42.1%	41.4%	41.4%	41.7%	39.8%	41.9%	44.8%	46.4%
Public 4 Year	Pell Grant	$452	$988	$1,038	$1,112	$1,162	$1,212	$1,288	$1,412	$1,482	$1,604	$1,705	$1,850	$2,050	$2,050	$2,050	$2,190
	PG % Costs	17.9%	36.6%	36.1%	35.5%	35.0%	34.5%	33.6%	33.1%	31.3%	30.9%	30.8%	31.6%	33.2%	31.9%	30.5%	31.0%
	Met Need	$452	$988	$1,038	$1,112	$1,162	$1,212	$1,288	$1,412	$1,542	$1,673	$1,766	$1,911	$2,121	$2,129	$2,131	$2,211
	MN % Costs	17.9%	36.6%	36.1%	35.5%	35.0%	34.5%	33.6%	33.1%	32.6%	32.3%	31.9%	32.7%	34.4%	33.2%	31.7%	31.3%
	Unmet Need	$2,067	$1,708	$1,839	$2,023	$2,155	$2,297	$2,547	$2,852	$3,194	$3,513	$3,767	$3,936	$4,046	$4,289	$4,601	$4,853
	UN % Costs	82.1%	63.4%	63.9%	64.5%	65.0%	65.5%	66.4%	66.9%	67.4%	67.7%	68.1%	67.3%	65.6%	66.8%	68.3%	68.7%
	UN % Income	48.4%	37.6%	36.5%	36.8%	37.1%	37.1%	38.2%	38.5%	38.0%	37.8%	38.2%	38.7%	38.1%	39.0%	41.1%	42.1%
Private 4 Year	Pell Grant	$452	$1,050	$1,400	$1,400	$1,400	$1,600	$1,800	$1,800	$1,596	$1,604	$1,725	$1,850	$2,050	$2,050	$2,050	$2,200
	PG % Costs	11.1%	24.5%	30.3%	27.9%	26.2%	27.5%	28.4%	25.4%	20.0%	18.2%	18.2%	18.2%	18.8%	17.8%	16.7%	16.8%
	Met Need	$452	$1,050	$1,400	$1,400	$1,400	$1,600	$1,800	$1,800	$1,656	$1,673	$1,786	$1,911	$2,121	$2,129	$2,131	$2,221
	MN % Costs	11.1%	24.5%	30.3%	27.9%	26.2%	27.5%	28.4%	25.4%	20.7%	19.0%	18.8%	18.8%	19.4%	18.5%	17.3%	17.0%
	Unmet Need	$3,607	$3,239	$3,213	$3,615	$3,948	$4,208	$4,539	$5,299	$6,336	$7,127	$7,698	$8,273	$8,793	$9,410	$10,161	$10,881
	UN % Costs	88.9%	75.5%	69.7%	72.1%	73.8%	72.5%	71.6%	74.6%	79.3%	81.0%	81.2%	81.2%	80.6%	81.5%	82.7%	83.0%
	UN % Income	84.4%	71.3%	63.8%	65.7%	67.9%	68.0%	68.1%	71.5%	75.3%	76.7%	78.1%	81.3%	82.9%	85.6%	90.7%	94.3%
D2: BLS LOWER FAMILY BUDGET(b)		$7,386	$8,181	$9,198	$9,588	$10,041	$10,481	$11,546	$12,585	$14,044	$15,323	$16,262	$16,786	$17,500	$18,124	$18,473	$19,027
Family SEI/SAI		$525	$586	$645	$648	$669	$730	$416	$428	$554	$633	$674	$704	$753	$789	$809	$686
Family SEI/SAI Effort		7.1%	7.2%	7.0%	6.8%	6.7%	7.0%	3.6%	3.4%	3.9%	4.1%	4.1%	4.2%	4.3%	4.4%	4.4%	3.6%
Public 2 Year	Pell Grant	$263	$578	$776	$776	$726	$912	$938	$888	$882	$983	$1,013	$1,150	$1,350	$921	$1,250	$1,550
	PG % Costs	10.4%	21.8%	27.9%	26.5%	23.6%	28.3%	26.9%	22.9%	19.7%	20.1%	19.6%	20.6%	22.9%	14.7%	18.7%	21.7%
	Met Need	$788	$1,164	$1,421	$1,424	$1,395	$1,642	$1,354	$1,316	$1,436	$1,616	$1,687	$1,854	$2,103	$1,710	$2,059	$2,236
	MN % Costs	31.2%	43.9%	51.0%	48.7%	45.4%	50.9%	38.8%	33.9%	32.0%	33.0%	32.7%	33.2%	35.7%	27.2%	30.8%	31.3%
	Unmet Need	$1,739	$1,489	$1,364	$1,501	$1,676	$1,586	$2,135	$2,563	$3,046	$3,285	$3,473	$3,728	$3,782	$4,568	$4,635	$4,902
	UN % Costs	68.8%	56.1%	49.0%	51.3%	54.6%	49.1%	61.2%	66.1%	68.0%	67.0%	67.3%	66.8%	64.3%	72.8%	69.2%	68.7%
	UN % Income	23.5%	18.2%	14.8%	15.7%	16.7%	15.1%	18.5%	20.4%	21.7%	21.4%	21.4%	22.2%	21.6%	25.2%	25.1%	25.8%
Public 4 Year	Pell Grant	$263	$578	$776	$776	$726	$956	$1,288	$1,326	$1,096	$983	$1,125	$1,150	$1,350	$1,130	$1,250	$1,550
	PG % Costs	10.4%	21.4%	27.0%	24.8%	21.9%	27.2%	33.6%	31.1%	23.1%	19.0%	20.3%	19.7%	21.9%	17.6%	18.6%	21.9%
	Met Need	$788	$1,164	$1,421	$1,424	$1,395	$1,686	$1,704	$1,754	$1,650	$1,616	$1,799	$1,854	$2,103	$1,919	$2,059	$2,236
	MN % Costs	31.3%	43.2%	49.4%	45.4%	42.1%	48.0%	44.4%	41.1%	34.8%	31.2%	32.5%	31.7%	34.1%	29.9%	30.6%	31.7%
	Unmet Need	$1,731	$1,532	$1,456	$1,711	$1,922	$1,823	$2,131	$2,510	$3,086	$3,570	$3,734	$3,993	$4,064	$4,499	$4,673	$4,828
	UN % Costs	68.7%	56.8%	50.6%	54.6%	57.9%	52.0%	55.6%	58.9%	65.2%	68.8%	67.5%	68.3%	65.9%	70.1%	69.4%	68.3%
	UN % Income	23.4%	18.7%	15.8%	17.8%	19.1%	17.4%	18.5%	19.9%	22.0%	23.3%	23.0%	23.8%	23.2%	24.8%	25.3%	25.4%
Private 4 Year	Pell Grant	$263	$578	$776	$776	$726	$956	$1,376	$1,326	$1,096	$983	$1,125	$1,150	$1,350	$1,130	$1,250	$1,550
	PG % Costs	6.5%	13.5%	16.8%	15.5%	13.6%	16.5%	21.7%	18.7%	13.7%	11.2%	11.9%	11.3%	12.4%	9.8%	10.2%	11.8%
	Met Need	$788	$1,164	$1,421	$1,424	$1,395	$1,686	$1,792	$1,754	$1,650	$1,616	$1,799	$1,854	$2,103	$1,919	$2,059	$2,236
	MN % Costs	19.4%	27.1%	30.8%	28.4%	26.1%	29.0%	28.3%	24.7%	20.6%	18.4%	19.0%	18.2%	19.3%	16.6%	16.8%	17.1%
	Unmet Need	$3,271	$3,125	$3,192	$3,591	$3,953	$4,122	$4,547	$5,345	$6,342	$7,184	$7,685	$8,330	$8,811	$9,620	$10,233	$10,866
	UN % Costs	80.6%	72.9%	69.2%	71.6%	73.9%	71.0%	71.7%	75.3%	79.4%	81.6%	81.0%	81.8%	80.7%	83.4%	83.2%	82.9%
	UN % Income	44.3%	38.2%	34.7%	37.5%	39.4%	39.3%	39.4%	42.5%	45.2%	46.9%	47.3%	49.6%	50.3%	53.1%	55.4%	57.1%

(a) Data compiled by ACT from NCES, ACT, and CSAC data.
(b) Family of 4, with 1 wage earner, 1 in college, no assets.

TABLE A-7: DEPENDENT PELL GRANT APPLICANT ELIGIBILITY
FOR FOUR SAMPLE DEPENDENT CASES, 1973-74 TO 1988-89 (CONTINUED)

									Academic Year								
		73-74	74-75	75-76	76-77	77-78	78-79	79-80	80-81	81-82	82-83	83-84	84-85	85-86	86-87	87-88	88-89
AVERAGE COLLEGE COSTS(a)																	
Public 2 Year - Off Campus		$2,527	$2,653	$2,785	$2,925	$3,071	$3,228	$3,489	$3,879	$4,482	$4,901	$5,160	$5,582	$5,885	$6,278	$6,694	$7,138
Public 4 Year - On Campus		$2,519	$2,696	$2,877	$3,135	$3,317	$3,509	$3,835	$4,264	$4,736	$5,186	$5,533	$5,847	$6,167	$6,418	$6,732	$7,064
Private 4 Year - On Campus		$4,059	$4,289	$4,613	$5,015	$5,348	$5,808	$6,339	$7,099	$7,992	$8,800	$9,484	$10,184	$10,914	$11,539	$12,292	$13,102
D3 BLS INTERMEDIATE BUDGET(b)		$11,446	$12,626	$14,333	$15,318	$16,236	$17,106	$18,622	$20,517	$23,134	$25,407	$26,965	$27,832	$29,017	$30,052	$30,630	$31,549
Family SEI/SAI		$1,302	$1,494	$1,738	$1,878	$2,013	$2,189	$1,007	$1,095	$1,304	$1,818	$1,980	$2,114	$2,312	$2,470	$2,560	$2,279
Family SEI/SAI Effort		11.4%	11.8%	12.1%	12.3%	12.4%	12.8%	5.4%	5.3%	5.6%	7.2%	7.3%	7.6%	8.0%	8.2%	8.4%	7.2%
Public 2 Year	Pell Grant	$0	$0	$0	$0	$0	$0	$776	$676	$346	$0	$0	$0	$0	$0	$0	$0
	PG % Costs							22.2%	17.4%	7.7%							
	Net Need	$1,302	$1,494	$1,738	$1,878	$2,013	$2,189	$1,783	$1,771	$1,650	$1,818	$1,980	$2,114	$2,312	$2,470	$2,560	$2,279
	NN % Costs	51.5%	56.3%	62.4%	64.2%	65.5%	67.8%	51.1%	45.7%	36.8%	37.1%	38.4%	37.9%	39.3%	39.3%	38.2%	31.9%
	Unmet Need	$1,225	$1,159	$1,047	$1,047	$1,058	$1,039	$1,706	$2,108	$2,832	$3,083	$3,180	$3,468	$3,573	$3,808	$4,134	$4,859
	UN % Costs	48.5%	43.7%	37.6%	35.8%	34.5%	32.2%	48.9%	54.3%	63.2%	62.9%	61.6%	62.1%	60.7%	60.7%	61.8%	68.1%
	UN % Income	10.7%	9.2%	7.3%	6.[illegible]	6.5%	6.1%	9.2%	10.3%	12.2%	12.1%	11.8%	12.5%	12.3%	12.7%	13.5%	15.4%
Public 4 Year	Pell Grant	$0	$0	$0	$0	$0	$0	$776	$676	$346	$0	$0	$0	$0	$0	$0	$0
	PG % Costs							20.2%	15.9%	7.3%							
	Net Need	$1,302	$1,494	$1,738	$1,878	$2,013	$2,189	$1,783	$1,771	$1,650	$1,818	$1,980	$2,114	$2,312	$2,470	$2,560	$2,279
	NN % Costs	51.7%	55.4%	60.4%	59.9%	60.7%	62.4%	46.5%	41.5%	34.8%	35.1%	35.8%	36.2%	37.5%	38.5%	38.0%	32.3%
	Unmet Need	$1,217	$1,202	$1,139	$1,257	$1,304	$1,320	$2,052	$2,493	$3,086	$3,368	$3,553	$3,733	$3,855	$3,948	$4,172	$4,785
	UN % Costs	48.3%	44.6%	39.6%	40.1%	39.3%	37.6%	53.5%	58.5%	65.2%	64.9%	64.2%	63.8%	62.5%	61.5%	62.0%	67.7%
	UN % Income	10.6%	9.5%	7.9%	8.2%	8.0%	7.7%	11.0%	12.2%	13.3%	13.3%	13.2%	13.4%	13.3%	13.1%	13.6%	15.2%
Private 4 Year	Pell Grant	$0	$0	$0	$0	$0	$0	$776	$676	$346	$0	$0	$0	$0	$0	$0	$0
	PG % Costs							12.2%	9.5%	4.3%							
	Net Need	$1,302	$1,494	$1,738	$1,878	$2,013	$2,189	$1,783	$1,771	$1,650	$1,818	$1,980	$2,114	$2,312	$2,470	$2,560	$2,279
	NN % Costs	32.1%	34.8%	37.7%	37.4%	37.6%	37.7%	28.1%	24.9%	20.6%	20.7%	20.9%	20.8%	21.2%	21.4%	20.8%	17.4%
	Unmet Need	$2,757	$2,795	$2,875	$3,137	$3,335	$3,619	$4,556	$5,328	$6,342	$6,982	$7,504	$8,070	$8,602	$9,069	$9,732	$10,823
	UN % Costs	67.9%	65.2%	62.3%	62.6%	62.4%	62.3%	71.9%	75.1%	79.4%	79.3%	79.1%	79.2%	78.8%	78.6%	79.2%	82.6%
	UN % Income	24.1%	22.1%	20.1%	20.5%	20.5%	21.2%	24.5%	26.0%	27.4%	27.5%	27.8%	29.0%	29.6%	30.2%	31.8%	34.3%
D4 BLS INTERMEDIATE BUDGET(c)		$11,446	$12,626	$14,333	$15,318	$16,236	$17,106	$18,622	$20,517	$23,134	$25,407	$26,965	$27,832	$29,017	$30,052	$30,630	$31,546
Family SEI/SAI		$911	$1,046	$1,217	$1,315	$1,409	$1,532	$705	$767	$913	$1,273	$1,386	$1,480	$1,618	$1,729	$1,792	$1,140
Family SEI/SAI Effort		8.0%	8.3%	8.5%	8.6%	8.7%	9.0%	3.8%	3.7%	3.9%	5.0%	5.1%	5.3%	5.6%	5.8%	5.9%	3.6%
Public 2 Year	Pell Grant	$102	$188	$0	$0	$0	$214	$912	$888	$746	$293	$425	$450	$450	$0	$350	$1,050
	PG % Costs	4.0%	7.1%	.0%	.0%	.0%	6.6%	26.1%	22.9%	16.6%	6.0%	8.2%	8.1%	7.6%	.0%	5.2%	14.7%
	Net Need	$1,013	$1,234	$1,217	$1,315	$1,409	$1,746	$1,617	$1,655	$1,659	$1,566	$1,811	$1,930	$2,068	$1,729	$2,142	$2,190
	NN % Costs	40.1%	46.5%	43.7%	45.0%	45.9%	54.1%	46.3%	42.7%	37.0%	32.0%	35.1%	34.6%	35.1%	27.5%	32.0%	30.7%
	Unmet Need	$1,514	$1,419	$1,568	$1,610	$1,662	$1,482	$1,872	$2,224	$2,823	$3,335	$3,349	$3,652	$3,817	$4,549	$4,552	$4,948
	UN % Costs	59.9%	53.5%	56.3%	55.0%	54.1%	45.9%	53.7%	57.3%	63.0%	68.0%	64.9%	65.4%	64.9%	72.5%	68.0%	69.3%
	UN % Income	13.2%	11.2%	10.9%	10.5%	10.2%	8.7%	10.1%	10.8%	12.2%	13.1%	12.4%	13.1%	13.2%	15.1%	14.9%	15.7%
Public 4 Year	Pell Grant	$102	$188	$0	$0	$0	$214	$1,076	$976	$746	$293	$425	$450	$450	$0	$350	$1,050
	PG % Costs	4.0%	7.0%	.0%	.0%	.0%	6.1%	28.1%	22.9%	15.8%	5.6%	7.7%	7.7%	7.3%	.0%	5.2%	14.9%
	Net Need	$1,013	$1,234	$1,217	$1,315	$1,409	$1,746	$1,781	$1,743	$1,659	$1,566	$1,811	$1,930	$2,068	$1,729	$2,142	$2,190
	NN % Costs	40.2%	45.8%	42.3%	41.9%	42.5%	49.8%	46.4%	40.9%	35.0%	30.2%	32.7%	33.0%	33.5%	26.9%	31.8%	31.0%
	Unmet Need	$1,506	$1,462	$1,660	$1,820	$1,908	$1,763	$2,054	$2,521	$3,077	$3,620	$3,722	$3,917	$4,099	$4,689	$4,590	$4,874
	UN % Costs	59.8%	54.2%	57.7%	58.1%	57.5%	50.2%	53.6%	59.1%	65.0%	69.8%	67.3%	67.0%	66.5%	73.1%	68.2%	69.0%
	UN % Income	13.2%	11.6%	11.6%	11.9%	11.8%	10.3%	11.0%	12.3%	13.3%	14.2%	13.8%	14.1%	14.1%	15.6%	15.0%	15.5%
Private 4 Year	Pell Grant	$102	$188	$0	$0	$0	$214	$1,076	$976	$746	$293	$425	$450	$450	$0	$350	$1,050
	PG % Costs	2.5%	4.4%	.0%	.0%	.0%	3.7%	17.0%	13.7%	9.3%	3.3%	4.5%	4.4%	4.1%	.0%	2.8%	8.0%
	Net Need	$1,013	$1,234	$1,217	$1,315	$1,409	$1,746	$1,781	$1,743	$1,659	$1,566	$1,811	$1,930	$2,068	$1,729	$2,142	$2,190
	NN % Costs	25.0%	28.8%	26.4%	26.2%	26.3%	30.1%	28.1%	24.6%	20.8%	17.8%	19.1%	19.0%	18.9%	15.0%	17.4%	16.7%
	Unmet Need	$3,046	$3,055	$3,396	$3,700	$3,939	$4,062	$4,558	$5,356	$6,333	$7,234	$7,673	$8,254	$8,846	$9,810	$10,150	$10,912
	UN % Costs	75.0%	71.2%	73.6%	73.8%	73.7%	69.9%	71.9%	75.4%	79.2%	82.2%	80.9%	81.0%	81.1%	85.0%	82.6%	83.3%
	UN % Income	26.6%	24.2%	23.7%	24.2%	24.3%	23.7%	24.5%	26.1%	27.4%	28.5%	28.5%	29.7%	30.5%	32.6%	33.1%	34.6%

(a) Data compiled by ACT from NCES, ACT, and CSAC data.
(b) Family of 4, with 1 wage earner, 1 in college, no assets.
(c) Family of 4, with 1 wage earner, 2 in college, no assets.

TABLE A-8

II: SAI FOR A SINGLE INDEPENDENT PELL APPLICANT WITH INCOME AT 50% OF POVERTY LEVEL, 1974-74 TO 1988-89

Academic/Award Year Base/Income Year	1973-74 1972	1974-75 1973	1975-76 1974	1976-77 1975	1977-78 1976	1978-79 1977	1979-80 1978	1980-81 1979	1981-82 1980	1982-83 1981	1983-84 1982	1984-85 1983	1985-86 1984	1986-87 1985	1987-88 1986	1988-89 1987
Income	$1,084	$1,154	$1,281	$1,399	$1,480	$1,576	$1,696	$1,889	$2,145	$2,365	$2,510	$2,590	$2,700	$2,797	$2,898	$3,000
Family Size Offset	$700	$850	$950	$1,000	$1,050	$1,100	$3,450	$3,850	$3,850	$4,200	$4,500	$4,700	$4,900	$5,100	$5,200	$5,300
Federal Taxes:																
Taxes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Fed Tax Effort	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%
State Taxes																$480
Total Allowances	$700	$850	$950	$1,000	$1,050	$1,100	$3,450	$3,850	$3,850	$4,200	$4,500	$4,700	$4,900	$5,100	$5,200	$5,780
Allowance % Inc	64.6%	73.7%	74.2%	71.5%	70.9%	69.8%	203.4%	203.8%	179.5%	177.6%	179.3%	181.5%	181.5%	182.3%	179.4%	192.7%
Discretionary Income	$384	$304	$331	$399	$430	$476	-$1,754	-$1,961	-$1,705	-$1,835	-$1,990	-$2,110	-$2,200	-$2,303	-$2,302	-$2,780
Family SEI/SAI	$288	$228	$248	$299	$323	$357	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
FSAI % Income	26.6%	19.8%	19.4%	21.4%	21.8%	22.7%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%
Student SEI/SAI	$288	$228	$248	$299	$323	$357	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
SAI % Income	26.6%	19.8%	19.4%	21.4%	21.8%	22.7%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%

TABLE A-9

12: SAI FOR A SINGLE INDEPENDENT PELL APPLICANT WITH INCOME AT 100% OF POVERTY LEVEL, 1973-74 TO 1988-89

Academic/Award Year	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89
Base/Income Year	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
Income	$2,168	$2,307	$2,562	$2,797	$2,959	$3,152	$3,392	$3,778	$4,290	$4,729	$5,019	$5,180	$5,400	$5,593	$5,793	$6,000
Family Size Offset	$700	$850	$950	$1,000	$1,050	$1,100	$3,450	$3,850	$3,850	$4,200	$4,500	$4,700	$4,900	$5,100	$5,200	$5,300
Federal Taxes:																
Exempt/St Deduct					$2,450					$1,000	$1,000	$1,000	$1,000	$1,040	$1,080	$4,440
Taxable Income	$2,168	$2,307	$2,562	$2,797	$509					$3,729	$4,019	$4,180	$4,400	$4,553	$4,713	$1,560
Taxes	$16	$37	$72	$61	$72	$0	$25	$67	$137	$203	$220	$222	$238	$251	$258	$172
Fed Tax Effort	.74%	1.60%	2.81%	2.18%	2.43%	.00%	.74%	1.77%	3.19%	4.29%	4.38%	4.29%	4.41%	4.49%	4.45%	2.87%
State Taxes																$480
Total Allowances	$716	$887	$1,022	$1,061	$1,122	$1,100	$3,475	$3,917	$3,987	$4,403	$4,720	$4,922	$5,138	$5,351	$5,458	$5,952
Allowance % Inc	33.0%	38.4%	39.9%	37.9%	37.9%	34.9%	102.4%	103.7%	92.9%	93.1%	94.0%	95.0%	95.1%	95.7%	94.2%	99.2%
Discretionary Income	$1,452	$1,420	$1,540	$1,736	$1,837	$2,052	-$83	-$139	$303	$326	$299	$258	$262	$242	$335	$48
Family SEI/SAI	$1,089	$1,065	$1,155	$1,302	$1,378	$1,539	$0	$0	$227	$245	$224	$194	$197	$182	$251	$36
FSAI % Income	50.2%	46.2%	45.1%	46.5%	46.6%	48.8%	.0%	.0%	5.3%	5.2%	4.5%	3.7%	3.6%	3.3%	4.3%	.6%
Student SEI/SAI	$1,089	$1,065	$1,155	$1,302	$1,378	$1,539	$0	$0	$227	$245	$224	$194	$197	$182	$251	$36
SAI % Income	50.2%	46.2%	45.1%	46.5%	46.6%	48.8%	.0%	.0%	5.3%	5.2%	4.5%	3.7%	3.6%	3.3%	4.3%	.6%

TABLE A-10

13: SAI FOR AN UNMARRIED PELL APPLICANT WITH DEPENDENT WITH INCOME AT 100% OF POVERTY LEVEL, 1973-74 TO 1988-89

Academic/Award Year Base/Income Year	1973-74 1972	1974-75 1973	1975-76 1974	1976-77 1975	1977-78 1976	1978-79 1977	1979-80 1978	1980-81 1979	1981-82 1980	1982-83 1981	1983-84 1982	1984-85 1983	1985-86 1984	1986-87 1985	1987-88 1986	1988-89 1987
Income	$2,808	$2,984	$3,312	$3,617	$3,826	$4,072	$4,383	$4,878	$5,537	$6,111	$6,487	$6,697	$6,983	$7,231	$7,488	$7,754
Family Size Offset	$2,800	$3,050	$3,400	$3,650	$3,850	$4,100	$4,450	$5,000	$5,000	$5,450	$5,800	$6,000	$6,200	$6,400	$6,500	$6,700
Federal Taxes:																
Exempt/St Deduct					$3,200					$2,000	$2,000	$2,000	$2,000	$2,080	$2,160	$6,340
Taxable Income	$2,808	$2,984	$3,312	$3,617	$626					$4,111	$4,487	$4,697	$4,983	$5,151	$5,328	$1,414
Taxes	$2	$23	$74	$74	$89	$0	$26	$81	$174	$252	$263	$267	$300	$312	$319	$155
Fed Tax Effort	.07%	.77%	2.23%	2.05%	2.33%	.00%	.59%	1.66%	3.14%	4.12%	4.05%	3.99%	4.30%	4.31%	4.26%	2.00%
State Taxes																$620
Total Allowances	$2,802	$3,073	$3,474	$3,724	$3,939	$4,100	$4,476	$5,081	$5,174	$5,702	$6,063	$6,267	$6,500	$6,712	$6,819	$7,475
Allowance % Inc	99.8%	103.0%	104.9%	103.0%	103.0%	100.7%	102.1%	104.2%	93.4%	93.3%	93.5%	93.6%	93.1%	92.8%	91.1%	96.4%
Discretionary Income	$6	-$89	-$162	-$107	-$113	-$28	-$93	-$203	$363	$409	$424	$430	$483	$519	$669	$279
Family SEI/SAI	$2	$0	$0	$0	$0	$0	$0	$0	$91	$102	$106	$108	$121	$130	$167	$31
FSAI % Income	.1%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	1.6%	1.7%	1.6%	1.6%	1.7%	1.8%	2.2%	.4%
Student SEI/SAI	$2	$0	$0	$0	$0	$0	$0	$0	$91	$102	$106	$108	$121	$130	$167	$31
SAI % Income	.1%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	1.6%	1.7%	1.6%	1.6%	1.7%	1.8%	2.2%	.4%

TABLE A-11:

14: SAI FOR A MARRIED PELL APPLICANT, 1 IN COLLEGE, WITH INCOME AT 150% OF POVERTY LEVEL, 1973-74 TO 1988-89

Academic/Award Year Base/Income Year	1973-74 1972	1974-75 1973	1975-76 1974	1976-77 1975	1977-78 1976	1978-79 1977	1979-80 1978	1980-81 1979	1981-82 1980	1982-83 1981	1983-84 1982	1984-85 1983	1985-86 1984	1986-87 1985	1987-88 1986	1988-89 1987
Income	$4,212	$4,476	$4,968	$5,426	$5,739	$6,108	$6,575	$7,317	$8,306	$9,167	$9,731	$10,046	$10,475	$10,847	$11,232	$11,631
Family Size Offset	$2,800	$3,050	$3,400	$3,650	$3,850	$4,100	$4,450	$5,000	$5,000	$5,450	$5,800	$6,000	$6,200	$6,400	$6,500	$6,700
Federal Taxes:																
Exempt/St Deduct					$3,600					$2,000	$2,000	$2,000	$2,000	$2,080	$2,160	$7,560
Taxable Income	$4,212	$4,476	$4,968	$5,426	$2,139					$7,167	$7,731	$8,046	$8,475	$8,767	$9,072	$4,071
Taxes	$204	$241	$318	$294	$312	$134	$201	$270	$426	$555	$566	$568	$606	$624	$643	$491
Fed Tax Effort	4.84%	5.38%	6.40%	5.42%	5.44%	2.19%	3.06%	3.69%	5.13%	6.05%	5.82%	5.65%	5.79%	5.75%	5.72%	4.22%
State Taxes																$930
Total Allowances	$3,004	$3,291	$3,718	$3,944	$4,162	$4,234	$4,651	$5,270	$5,426	$6,005	$6,366	$6,568	$6,806	$7,024	$7,143	$8,121
Allowance % Inc	71.3%	73.5%	74.8%	72.7%	72.5%	69.3%	70.7%	72.0%	65.3%	65.5%	65.4%	65.4%	65.0%	64.8%	63.6%	69.8%
Discretionary Income	$1,208	$1,185	$1,250	$1,482	$1,577	$1,874	$1,924	$2,047	$2,880	$3,162	$3,365	$3,478	$3,669	$3,823	$4,089	$3,510
Family SEI/SAI	$604	$593	$625	$741	$789	$937	$962	$512	$720	$791	$841	$870	$917	$956	$1,022	$2,633
FSAI % Income	14.3%	13.2%	12.6%	13.7%	13.7%	15.3%	14.6%	7.0%	8.7%	8.6%	8.6%	8.7%	8.8%	8.8%	9.1%	22.6%
Student SEI/SAI	$604	$593	$625	$741	$789	$937	$962	$512	$720	$791	$841	$870	$917	$956	$1,022	$2,633
SAI % Income	14.3%	13.2%	12.6%	13.7%	13.7%	15.3%	14.6%	7.0%	8.7%	8.6%	8.6%	8.7%	8.8%	8.8%	9.1%	22.6%

TABLE A-12: INDEPENDENT PELL GRANT APPLICANT ELIGIBILITY AT TYPICAL FAMILY SIZES AND INCOME LEVELS, 1973-74 TO 1988-89

		Academic Year															
		73-74	74-75	75-76	76-77	77-78	78-79	79-80	80-81	81-82	82-83	83-84	84-85	85-86	86-87	87-88	88-89
AVERAGE COLLEGE COSTS(a)																	
Public 2 Year - Off Campus		$2,525	$2,653	$2,785	$2,925	$3,071	$3,228	$3,489	$3,879	$4,482	$4,901	$5,160	$5,582	$5,885	$6,278	$6,694	$7,138
Public 4 Year - On Campus		$2,519	$2,696	$2,877	$3,135	$3,317	$3,509	$3,835	$4,264	$4,736	$5,186	$5,533	$5,847	$6,167	$6,418	$6,732	$7,064
Private 4 Year - On Campus		$4,059	$4,289	$4,613	$5,015	$5,348	$5,808	$6,339	$7,099	$7,992	$8,800	$9,484	$10,184	$10,914	$11,539	$12,292	$13,102
I1: FAMILY SIZE = 1,		$1,084	$1,154	$1,281	$1,399	$1,480	$1,576	$1,696	$1,889	$2,145	$2,365	$2,510	$2,590	$2,700	$2,797	$2,898	$3,000
INCOME = 50% OF POVERTY LEVEL																	
Family SEI/SAI		$288	$228	$248	$299	$323	$357	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Family SEI/SAI Effort		26.6%	19.8%	19.4%	21.4%	21.8%	22.7%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%
Public 2 Year	Pell Grant	$363	$776	$862	$888	$912	$912	$938	$888	$882	$988	$1,013	$1,275	$1,590	$1,590	$1,590	$1,770
	PG % Costs	14.4%	29.2%	31.0%	30.4%	29.7%	28.3%	26.9%	22.9%	19.7%	20.2%	19.6%	22.8%	27.0%	25.3%	23.8%	24.8%
	Net Need	$651	$1,004	$1,110	$1,187	$1,235	$1,269	$938	$888	$882	$988	$1,013	$1,275	$1,590	$1,590	$1,590	$1,770
	NN % Costs	25.8%	37.8%	39.9%	40.6%	40.2%	39.3%	26.9%	22.9%	19.7%	20.2%	19.6%	22.8%	27.0%	25.3%	23.8%	24.8%
	Unmet Need	$1,874	$1,649	$1,675	$1,738	$1,836	$1,959	$2,551	$2,991	$3,600	$3,913	$4,147	$4,307	$4,295	$4,688	$5,104	$5,368
	UN % Costs	74.2%	62.2%	60.1%	59.4%	59.8%	60.7%	73.1%	77.1%	80.3%	79.8%	80.4%	77.2%	73.0%	74.7%	76.2%	75.2%
	UN % Income	172.9%	142.9%	130.8%	124.2%	124.1%	124.3%	150.4%	158.3%	167.8%	165.5%	165.2%	166.3%	159.1%	167.6%	176.1%	178.9%
Public 4 Year	Pell Grant	$363	$876	$1,038	$1,112	$1,076	$1,212	$1,288	$1,362	$1,482	$1,674	$1,800	$1,900	$2,100	$2,100	$2,100	$2,190
	PG % Costs	14.4%	32.5%	36.1%	35.5%	32.4%	34.5%	33.6%	31.9%	31.3%	32.3%	32.5%	32.5%	34.1%	32.7%	31.2%	31.0%
	Net Need	$651	$1,104	$1,286	$1,411	$1,399	$1,569	$1,288	$1,362	$1,482	$1,674	$1,800	$1,900	$2,100	$2,100	$2,100	$2,190
	NN % Costs	25.8%	41.6%	46.2%	48.2%	45.6%	48.6%	36.9%	35.1%	33.1%	34.2%	34.9%	34.0%	35.7%	33.5%	31.4%	30.7%
	Unmet Need	$1,868	$1,592	$1,591	$1,724	$1,918	$1,940	$2,547	$2,902	$3,254	$3,512	$3,733	$3,947	$4,067	$4,318	$4,632	$4,874
	UN % Costs	74.2%	59.1%	55.3%	55.0%	57.8%	55.3%	66.4%	68.1%	68.7%	67.7%	67.5%	67.5%	65.9%	67.3%	68.8%	69.0%
	UN % Income	172.3%	138.0%	124.2%	123.2%	129.6%	123.1%	150.2%	153.6%	151.7%	148.5%	148.7%	152.4%	150.6%	154.4%	159.8%	162.5%
Private 4 Year	Pell Grant	$363	$882	$1,176	$1,126	$1,076	$1,312	$1,800	$1,750	$1,670	$1,674	$1,800	$1,900	$2,100	$2,100	$2,100	$2,200
	PG % Costs	8.9%	20.6%	25.5%	22.5%	20.1%	22.6%	28.4%	24.7%	20.9%	19.0%	19.0%	18.7%	19.2%	18.2%	17.1%	16.8%
	Net Need	$651	$1,110	$1,424	$1,425	$1,399	$1,669	$1,800	$1,750	$1,670	$1,674	$1,800	$1,900	$2,100	$2,100	$2,100	$2,200
	NN % Costs	16.0%	25.9%	30.9%	28.4%	26.2%	28.7%	28.4%	24.7%	20.9%	19.0%	19.0%	18.7%	19.2%	18.2%	17.1%	16.8%
	Unmet Need	$3,408	$3,179	$3,189	$3,590	$3,949	$4,139	$4,539	$5,349	$6,322	$7,126	$7,684	$8,284	$8,814	$9,439	$10,192	$10,902
	UN % Costs	84.0%	74.1%	69.1%	71.6%	73.8%	71.3%	71.6%	75.3%	79.1%	81.0%	81.0%	81.3%	80.8%	81.8%	82.9%	83.2%
	UN % Income	314.4%	275.5%	248.9%	256.6%	266.8%	262.6%	267.6%	283.2%	294.7%	301.3%	306.1%	319.8%	326.4%	337.5%	351.7%	363.4%
I2: FAMILY SIZE = 1,		$2,168	$2,307	$2,562	$2,797	$2,959	$3,152	$3,392	$3,778	$4,290	$4,729	$5,019	$5,180	$5,400	$5,593	$5,793	$6,000
INCOME = 100% OF POVERTY LEVEL																	
Family SEI/SAI		$1,089	$1,065	$1,155	$1,302	$1,378	$1,539	$0	$0	$227	$245	$224	$194	$197	$182	$251	$36
Family SEI/SAI Effort		50.2%	46.2%	45.1%	46.5%	46.6%	48.8%	.0%	.0%	5.3%	5.2%	4.5%	3.7%	3.6%	3.3%	4.3%	.6%
Public 2 Year	Pell Grant	$70	$162	$226	$0	$0	$214	$938	$888	$882	$988	$1,013	$1,275	$1,590	$1,590	$1,590	$1,770
	PG % Costs	2.8%	6.1%	8.1%	.0%	.0%	6.6%	26.9%	22.9%	19.7%	20.2%	19.6%	22.8%	27.0%	25.3%	23.8%	24.8%
	Net Need	$1,159	$1,227	$1,381	$1,302	$1,378	$1,753	$938	$888	$1,109	$1,233	$1,237	$1,469	$1,787	$1,772	$1,841	$1,806
	NN % Costs	45.9%	46.2%	49.6%	44.5%	44.9%	54.3%	26.9%	22.9%	24.7%	25.2%	24.0%	26.3%	30.4%	28.2%	27.5%	25.3%
	Unmet Need	$1,366	$1,426	$1,404	$1,623	$1,693	$1,475	$2,551	$2,991	$3,373	$3,668	$3,923	$4,113	$4,098	$4,506	$4,853	$5,332
	UN % Costs	54.1%	53.8%	50.4%	55.5%	55.1%	45.7%	73.1%	77.1%	75.3%	74.8%	76.0%	73.7%	69.6%	71.8%	72.5%	74.7%
	UN % Income	63.0%	61.8%	54.8%	58.0%	57.2%	46.8%	75.2%	79.2%	78.6%	77.6%	78.2%	79.4%	75.9%	80.6%	83.8%	88.9%
Public 4 Year	Pell Grant	$70	$162	$226	$0	$0	$214	$1,288	$1,362	$1,446	$1,465	$1,575	$1,750	$1,950	$1,950	$1,850	$2,190
	PG % Costs	2.8%	6.0%	7.9%	.0%	.0%	6.1%	33.6%	31.9%	30.5%	28.2%	28.5%	29.9%	31.6%	30.4%	27.5%	31.0%
	Net Need	$1,159	$1,227	$1,381	$1,302	$1,378	$1,753	$1,288	$1,362	$1,673	$1,710	$1,799	$1,944	$2,147	$2,132	$2,101	$2,226
	NN % Costs	46.0%	45.5%	48.0%	41.5%	41.5%	50.0%	33.6%	31.9%	35.3%	33.0%	32.5%	33.2%	34.8%	33.2%	31.2%	31.5%
	Unmet Need	$1,360	$1,469	$1,496	$1,833	$1,939	$1,756	$2,547	$2,902	$3,063	$3,476	$3,734	$3,903	$4,020	$4,286	$4,631	$4,838
	UN % Costs	54.0%	54.5%	52.0%	58.5%	58.5%	50.0%	66.4%	68.1%	64.7%	67.0%	67.5%	66.8%	65.2%	66.8%	68.8%	68.5%
	UN % Income	62.7%	63.7%	58.4%	65.5%	65.5%	55.7%	75.1%	76.8%	71.4%	73.5%	74.4%	75.3%	74.4%	76.6%	79.9%	80.6%
Private 4 Year	Pell Grant	$70	$162	$226	$0	$0	$214	$1,800	$1,750	$1,446	$1,465	$1,575	$1,750	$1,950	$1,950	$1,850	$2,200
	PG % Costs	1.7%	3.8%	4.9%	.0%	.0%	3.7%	28.4%	24.7%	18.1%	16.6%	16.6%	17.2%	17.9%	16.9%	15.1%	16.8%
	Net Need	$1,159	$1,227	$1,381	$1,302	$1,378	$1,753	$1,800	$1,750	$1,673	$1,710	$1,799	$1,944	$2,147	$2,132	$2,101	$2,236
	NN % Costs	28.6%	28.6%	29.9%	26.0%	25.8%	30.2%	28.4%	24.7%	20.9%	19.4%	19.0%	19.1%	19.7%	18.5%	17.1%	17.1%
	Unmet Need	$2,900	$3,062	$3,232	$3,713	$3,970	$4,055	$4,539	$5,349	$6,319	$7,090	$7,685	$8,240	$8,767	$9,407	$10,191	$10,866
	UN % Costs	71.4%	71.4%	70.1%	74.0%	74.2%	69.8%	71.6%	75.3%	79.1%	80.6%	81.0%	80.9%	80.3%	81.5%	82.9%	82.9%
	UN % Income	133.8%	132.7%	126.2%	132.7%	134.2%	128.6%	133.8%	141.6%	147.3%	149.9%	153.1%	159.1%	162.4%	168.2%	175.9%	181.1%

(a) Data compiled from NCES, ACT and CSAC surveys.

TABLE A-12: INDEPENDENT PELL GRANT APPLICANT ELIGIBILITY AT TYPICAL FAMILY SIZES AND INCOME LEVELS, 1973-74 TO 1988-89 (CONTINUED)

		Academic Year															
		73-74	74-75	75-76	76-77	77-78	78-79	79-80	80-81	81-82	82-83	83-84	84-85	85-86	86-87	87-88	88-89
AVERAGE COLLEGE COSTS(a)																	
Public 2 Year - Off Campus		$2,525	$2,653	$2,785	$2,925	$3,071	$3,228	$3,489	$3,879	$4,482	$4,901	$5,160	$5,582	$5,885	$6,278	$6,694	$7,138
Public 4 Year - On Campus		$2,519	$2,696	$2,877	$3,135	$3,317	$3,509	$3,835	$4,264	$4,736	$5,186	$5,533	$5,847	$6,167	$6,418	$6,732	$7,064
Private 4 Year - On Campus		$4,059	$4,289	$4,613	$5,015	$5,348	$5,808	$6,339	$7,099	$7,992	$8,800	$9,484	$10,184	$10,914	$11,539	$12,292	$13,102
I3: FAMILY SIZE = 2, UNMARRIED, INCOME = 100% OF POVERTY LEVEL		$2,808	$2,984	$3,312	$3,617	$3,826	$4,072	$4,383	$4,878	$5,537	$6,111	$6,487	$6,697	$6,983	$7,231	$7,488	$7,754
Family SEI/SAI		$2	$0	$0	$0	$0	$0	$0	$0	$91	$102	$106	$108	$121	$130	$167	$31
Family SEI/SAI Effort		.1%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	2.0%	2.1%	2.1%	1.9%	2.1%	2.1%	2.5%	.4%
Public 2 Year	Pell Grant	$443	$888	$862	$888	$912	$912	$938	$888	$882	$988	$1,013	$1,275	$1,590	$1,590	$1,590	$1,770
	PG % Costs	17.5%	33.5%	31.0%	30.4%	29.7%	28.3%	26.9%	22.9%	19.7%	20.2%	19.6%	22.8%	27.0%	25.3%	23.8%	24.8%
	Met Need	$445	$888	$862	$888	$912	$912	$938	$888	$973	$1,090	$1,119	$1,383	$1,711	$1,720	$1,757	$1,801
	MN % Costs	17.6%	33.5%	31.0%	30.4%	29.7%	28.3%	26.9%	22.9%	21.7%	22.2%	21.7%	24.8%	29.1%	27.4%	26.2%	25.2%
	Unmet Need	$2,080	$1,765	$1,923	$2,037	$2,159	$2,316	$2,551	$2,991	$3,509	$3,811	$4,041	$4,199	$4,174	$4,558	$4,937	$5,337
	UN % Costs	82.4%	66.5%	69.0%	69.6%	70.3%	71.7%	73.1%	77.1%	78.3%	77.8%	78.3%	75.2%	70.9%	72.6%	73.8%	74.8%
	UN % Income	74.1%	59.1%	58.1%	56.3%	56.4%	56.9%	58.2%	61.3%	63.4%	62.4%	62.3%	62.7%	59.8%	63.0%	65.9%	68.8%
Public 4 Year	Pell Grant	$443	$988	$1,038	$1,112	$1,162	$1,212	$1,288	$1,362	$1,482	$1,651	$1,675	$1,750	$1,950	$1,950	$1,950	$2,190
	PG % Costs	17.6%	36.6%	36.1%	35.5%	35.0%	34.5%	33.6%	31.9%	31.3%	31.8%	30.3%	29.9%	31.6%	30.4%	29.0%	31.0%
	Met Need	$445	$988	$1,038	$1,112	$1,162	$1,212	$1,288	$1,362	$1,573	$1,753	$1,781	$1,858	$2,071	$2,080	$2,117	$2,221
	MN % Costs	17.7%	36.6%	36.1%	35.5%	35.0%	34.5%	33.6%	31.9%	33.2%	33.8%	32.2%	31.8%	33.6%	32.4%	31.4%	31.4%
	Unmet Need	$2,074	$1,708	$1,839	$2,023	$2,155	$2,297	$2,547	$2,902	$3,163	$3,433	$3,752	$3,989	$4,096	$4,338	$4,615	$4,843
	UN % Costs	82.3%	63.4%	63.9%	64.5%	65.0%	65.5%	66.4%	68.1%	66.8%	66.2%	67.8%	68.2%	66.4%	67.6%	68.6%	68.6%
	UN % Income	73.9%	57.2%	55.5%	55.9%	56.3%	56.4%	58.1%	59.5%	57.1%	56.2%	57.8%	59.6%	58.7%	60.0%	61.6%	62.5%
Private 4 Year	Pell Grant	$443	$1,050	$1,400	$1,400	$1,400	$1,580	$1,800	$1,750	$1,596	$1,651	$1,675	$1,750	$1,950	$1,950	$1,950	$2,200
	PG % Costs	10.9%	24.5%	30.3%	27.9%	26.2%	27.2%	28.4%	24.7%	20.0%	18.8%	17.7%	17.2%	17.9%	16.9%	15.9%	16.8%
	Met Need	$445	$1,050	$1,400	$1,400	$1,400	$1,580	$1,800	$1,750	$1,687	$1,753	$1,781	$1,858	$2,071	$2,080	$2,117	$2,231
	MN % Costs	11.0%	24.5%	30.3%	27.9%	26.2%	27.2%	28.4%	24.7%	21.1%	19.9%	18.8%	18.2%	19.0%	18.0%	17.2%	17.0%
	Unmet Need	$3,614	$3,239	$3,213	$3,615	$3,948	$4,228	$4,539	$5,349	$6,305	$7,047	$7,703	$8,326	$8,843	$9,459	$10,175	$10,871
	UN % Costs	89.0%	75.5%	69.7%	72.1%	73.8%	72.8%	71.6%	75.3%	78.9%	80.1%	81.2%	81.8%	81.0%	82.0%	82.8%	83.0%
	UN % Income	128.7%	108.5%	97.0%	99.9%	103.2%	103.8%	103.6%	109.7%	113.9%	115.3%	118.7%	124.3%	126.6%	130.8%	135.9%	140.2%
I4: FAMILY SIZE = 2, MARRIED, INCOME = 150% OF POVERTY		$4,212	$4,476	$4,968	$5,426	$5,739	$6,108	$6,575	$7,317	$8,306	$9,167	$9,731	$10,046	$10,475	$10,847	$11,232	$11,631
Family SEI/SAI		$604	$593	$625	$741	$789	$937	$962	$512	$720	$791	$841	$870	$917	$956	$1,022	$2,633
Family SEI/SAI Effort		14.3%	13.2%	12.6%	13.7%	13.7%	15.3%	14.6%	7.0%	8.7%	8.6%	8.6%	8.7%	8.8%	8.8%	9.1%	22.6%
Public 2 Year	Pell Grant	$217	$578	$776	$676	$626	$758	$826	$888	$882	$858	$975	$1,050	$1,150	$565	$1,050	$0
	PG % Costs	8.6%	21.8%	27.9%	23.1%	20.4%	23.5%	23.7%	22.9%	19.7%	17.5%	18.9%	18.8%	19.5%	9.0%	15.7%	.0%
	Met Need	$821	$1,171	$1,401	$1,417	$1,415	$1,695	$1,788	$1,400	$1,602	$1,649	$1,816	$1,920	$2,067	$1,521	$2,072	$2,633
	MN % Costs	32.5%	44.1%	50.3%	48.4%	46.1%	52.5%	51.2%	36.1%	35.7%	33.6%	35.2%	34.4%	35.1%	24.2%	31.0%	36.9%
	Unmet Need	$1,704	$1,482	$1,384	$1,508	$1,656	$1,533	$1,701	$2,479	$2,880	$3,252	$3,344	$3,662	$3,818	$4,757	$4,622	$4,505
	UN % Costs	67.5%	55.9%	49.7%	51.6%	53.9%	47.5%	48.8%	63.9%	64.3%	66.4%	64.8%	65.6%	64.9%	75.8%	69.0%	63.1%
	UN % Income	40.5%	33.1%	27.9%	27.8%	28.9%	25.1%	25.9%	33.9%	34.7%	35.5%	34.4%	36.5%	36.4%	43.9%	41.2%	38.7%
Public 4 Year	Pell Grant	$217	$578	$776	$676	$626	$758	$826	$1,226	$946	$858	$975	$1,050	$1,150	$565	$1,050	$0
	PG % Costs	8.6%	21.4%	27.0%	21.6%	18.9%	21.6%	21.5%	28.8%	20.0%	16.5%	17.6%	18.0%	18.6%	8.8%	15.6%	.0%
	Met Need	$821	$1,171	$1,401	$1,417	$1,415	$1,695	$1,788	$1,738	$1,666	$1,649	$1,816	$1,920	$2,067	$1,521	$2,072	$2,633
	MN % Costs	32.6%	43.4%	48.7%	45.2%	42.7%	48.3%	46.6%	40.8%	35.2%	31.8%	32.8%	32.8%	33.5%	23.7%	30.8%	37.3%
	Unmet Need	$1,698	$1,525	$1,476	$1,718	$1,902	$1,814	$2,047	$2,526	$3,070	$3,537	$3,717	$3,927	$4,100	$4,897	$4,660	$4,431
	UN % Costs	67.4%	56.6%	51.3%	54.8%	57.3%	51.7%	53.4%	59.2%	64.8%	68.2%	67.2%	67.2%	66.5%	76.3%	69.2%	62.7%
	UN % Income	40.3%	34.1%	29.7%	31.7%	33.1%	29.7%	31.1%	34.5%	37.0%	38.6%	38.2%	39.1%	39.1%	45.1%	41.5%	38.1%
Private 4 Year	Pell Grant	$217	$578	$776	$676	$626	$758	$826	$1,226	$946	$858	$975	$1,050	$1,150	$565	$1,050	$0
	PG % Costs	5.3%	13.5%	16.8%	13.5%	11.7%	13.1%	13.0%	17.3%	11.8%	9.8%	10.3%	10.3%	10.5%	4.9%	8.5%	.0%
	Met Need	$821	$1,171	$1,401	$1,417	$1,415	$1,695	$1,788	$1,738	$1,666	$1,649	$1,816	$1,920	$2,067	$1,521	$2,072	$2,633
	MN % Costs	20.2%	27.3%	30.4%	28.3%	26.5%	29.2%	28.2%	24.5%	20.8%	18.7%	19.1%	18.9%	18.9%	13.2%	16.9%	20.1%
	Unmet Need	$3,238	$3,118	$3,212	$3,598	$3,933	$4,113	$4,551	$5,361	$6,326	$7,151	$7,668	$8,264	$8,847	$10,018	$10,220	$10,469
	UN % Costs	79.8%	72.7%	69.6%	71.7%	73.5%	70.8%	71.8%	75.5%	79.2%	81.3%	80.9%	81.1%	81.1%	86.8%	83.1%	79.9%
	UN % Income	76.9%	69.7%	64.7%	66.3%	68.5%	67.3%	69.2%	73.3%	76.2%	78.0%	78.8%	82.3%	84.5%	92.4%	91.0%	90.0%

(a) Data compiled from NCES, ACT and CSAC surveys.

TABLE A-13

PELL BUDGETS USED IN STUDY

	Academic/Award Year															
	73-74	74-75	75-76	76-77	77-78	78-79	79-80	80-81	81-82	82-83	83-84	84-85	85-86	86-87	87-88	88-89
PUBLIC 2-YEAR COLLEGE - LIVING OFF CAMPUS																
Tuition & Fees	$274	$277	$245	$283	$306	$327	$355	$385	$432	$473	$528	$584	$620	$650	$681	$713
Books & Misc	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$0
Living Allowance	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,600	$1,600	$1,600	$1,600	$2,200
Pell Budget	$1,774	$1,777	$1,745	$1,783	$1,806	$1,827	$1,855	$1,885	$1,932	$1,973	$2,028	$2,584	$2,620	$2,650	$2,681	$2,913
PUBLIC 4-YEAR COLLEGE - LIVING ON CAMPUS																
Tuition & Fees	$463	$448	$469	$564	$596	$622	$662	$721	$813	$936	$1,052	$1,117	$1,200	$1,270	$1,344	$1,422
Books & Misc.	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$0
Room & Board	$1,043	$1,110	$1,188	$1,264	$1,336	$1,405	$1,536	$1,699	$1,888	$2,096	$2,233	$2,401	$2,550	$2,670	$2,796	$2,200
Pell Budget	$1,906	$1,958	$2,057	$2,228	$2,332	$2,427	$2,598	$2,820	$3,101	$3,432	$3,685	$3,918	$4,150	$4,340	$4,540	$3,622
PRIVATE 4-YEAR COLLEGE - LIVING ON CAMPUS																
Tuition & Fees	$1,925	$1,954	$2,084	$2,351	$2,520	$2,771	$3,020	$3,390	$3,855	$4,329	$4,726	$5,135	$5,550	$6,000	$6,486	$7,011
Books & Misc.	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$0
Room & Board	$1,115	$1,202	$1,301	$1,363	$1,448	$1,555	$1,679	$1,859	$2,094	$2,317	$2,518	$2,714	$2,950	$3,070	$3,195	$2,200
Pell Budget	$3,440	$3,556	$3,785	$4,114	$4,368	$4,726	$5,099	$5,649	$6,349	$7,046	$7,644	$8,249	$8,900	$9,470	$10,081	$9,211

TABLE A-14

CHANGE IN PELL GRANT ELIGIBILITY FOR A DEPENDENT APPLICANT, FAMILY SIZE IS 4, 1 IN COLLEGE, AT DIFFERENT INCOME LEVELS AND COLLEGE TYPES, BETWEEN 1987-88 AND 1988-89

	Family Income (1986)													
	$0	$4,000	$8,000	$10,000	$12,000	$14,000	$16,000	$18,000	$20,000	$22,000	$24,000	$26,000	$28,000	$30,000
1987-88 Eligibility														
Family Size Offset	$10,100	$10,100	$10,100	$10,100	$10,100	$10,100	$10,100	$10,100	$10,100	$10,100	$10,100	$10,100	$10,100	$10,100
Federal Taxes (1986):														
Exemptions ($1080)	$4,320	$4,320	$4,320	$4,320	$4,320	$4,320	$4,320	$4,320	$4,320	$4,320	$4,320	$4,320	$4,320	$4,320
Taxable Income	-$4,320	-$320	$3,680	$5,680	$7,680	$9,680	$11,680	$13,680	$15,680	$17,680	$19,680	$21,680	$23,680	$25,680
Federal Taxes	$0	$0	$1	$221	$458	$727	$1,007	$1,304	$1,624	$1,952	$2,312	$2,672	$3,107	$3,547
Discretionary Income	-$10,100	-$6,100	-$2,101	-$321	$1,442	$3,173	$4,893	$6,596	$8,276	$9,948	$11,588	$13,228	$14,793	$16,353
Family SAI	$0	$0	$0	$0	$159	$349	$538	$757	$976	$1,193	$1,486	$1,781	$2,083	$2,438
Student SAI	$0	$0	$0	$0	$159	$349	$538	$757	$976	$1,193	$1,486	$1,781	$2,083	$2,438
Pell Grant:														
Public 2-Year	$1,590	$1,590	$1,590	$1,590	$1,590	$1,590	$1,550	$1,350	$1,150	$950	$650	$350	$0	$0
Public 4-Year	$2,100	$2,100	$2,100	$2,100	$1,950	$1,750	$1,550	$1,350	$1,150	$950	$650	$350	$0	$0
Private 4-Year	$2,100	$2,100	$2,100	$2,100	$1,950	$1,750	$1,550	$1,350	$1,150	$950	$650	$350	$0	$0
	Family Income (1987)													
	$0	$4,184	$8,368	$10,460	$12,552	$14,644	$16,736	$18,828	$20,920	$23,012	$25,104	$27,196	$29,288	$31,380
1988-89 Eligibility														
Family Size Offset	$10,400	$10,400	$10,400	$10,400	$10,400	$10,400	$10,400	$10,400	$10,400	$10,400	$10,400	$10,400	$10,400	$10,400
Federal Taxes (1987):														
Exemptions ($1900)	$7,600	$7,600	$7,600	$7,600	$7,600	$7,600	$7,600	$7,600	$7,600	$7,600	$7,600	$7,600	$7,600	$7,600
Standard Deduction	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760
Taxable Income	-$11,360	-$7,176	-$2,992	-$900	$1,192	$3,284	$5,376	$7,468	$9,560	$11,652	$13,744	$15,836	$17,928	$20,020
Federal Taxes	$0	$0	$0	$0	$131	$371	$686	$1,024	$1,316	$1,631	$1,939	$2,186	$2,569	$2,884
State Taxes (8%)	$0	$335	$669	$837	$1,004	$1,172	$1,339	$1,506	$1,674	$1,841	$2,008	$2,176	$2,343	$2,510
Discretionary Income	-$10,400	-$6,551	-$2,701	-$777	$1,017	$2,701	$4,311	$5,898	$7,530	$9,140	$10,757	$12,434	$13,976	$15,586
Family SAI	$0	$0	$0	$0	$112	$297	$474	$667	$879	$1,088	$1,336	$1,638	$1,916	$2,247
Student SAI	$0	$0	$0	$0	$112	$297	$474	$667	$879	$1,088	$1,336	$1,638	$1,916	$2,247
Pell Grant:														
Public 2-Year	$1,770	$1,770	$1,770	$1,770	$1,770	$1,770	$1,750	$1,550	$1,350	$1,150	$850	$550	$250	$0
Public 4-Year	$2,190	$2,190	$2,190	$2,190	$2,050	$1,950	$1,750	$1,550	$1,350	$1,150	$850	$550	$250	$0
Private 4-Year	$2,200	$2,200	$2,200	$2,200	$2,050	$1,950	$1,750	$1,550	$1,350	$1,150	$850	$550	$250	$0
Change in Pell Grant														
Public 2-Year	$180	$180	$180	$180	$180	$180	$200	$200	$200	$200	$200	$200	$250	$0
Public 4-Year	$90	$90	$90	$90	$100	$200	$200	$200	$200	$200	$200	$200	$250	$0
Private 4-Year	$100	$100	$100	$100	$100	$200	$200	$200	$200	$200	$200	$200	$250	$0

TABLE A-15
CHANGE IN PELL GRANT ELIGIBILITY FOR A DEPENDENT APPLICANT, FAMILY SIZE IS 4, 2 IN COLLEGE, AT DIFFERENT INCOME LEVELS AND COLLEGE TYPES, BETWEEN 1987-88 AND 1988-89

	Family Income (1986)										
	$0	$4,000	$8,000	$12,000	$16,000	$20,000	$24,000	$28,000	$32,000	$36,000	$40,000
1987-88 Eligibility											
Family Size Offset	$10,100	$10,100	$10,100	$10,100	$10,100	$10,100	$10,100	$10,100	$10,100	$10,100	$10,100
Federal Taxes (1986):											
Exemptions ($1080)	$4,320	$4,320	$4,320	$4,320	$4,320	$4,320	$4,320	$4,320	$4,320	$4,320	$4,320
Taxable Income	-$4,320	-$320	$3,680	$7,680	$11,680	$15,680	$19,680	$23,680	$27,680	$31,680	$35,680
Federal Taxes	$0	$0	$1	$458	$1,007	$1,624	$2,312	$3,107	$4,021	$5,021	$6,123
Discretionary Income	-$10,100	-$6,100	-$2,101	$1,442	$4,893	$8,276	$11,588	$14,793	$17,879	$20,879	$23,777
Family SAI	$0	$0	$0	$159	$538	$976	$1,486	$2,083	$2,820	$3,570	$4,294
Student SAI	$0	$0	$0	$111	$377	$683	$1,040	$1,458	$1,974	$2,499	$3,006
Pell Grant:											
Public 2-Year	$1,590	$1,590	$1,590	$1,590	$1,590	$1,450	$1,050	$650	$0	$0	$0
Public 4-Year	$2,100	$2,100	$2,100	$1,950	$1,750	$1,450	$1,050	$650	$0	$0	$0
Private 4-Year	$2,100	$2,100	$2,100	$1,950	$1,750	$1,450	$1,050	$650	$0	$0	$0
	Family Income (1987)										
	$0	$4,184	$8,368	$12,552	$16,736	$20,920	$25,104	$29,288	$33,472	$37,656	$41,840
1988-89 Eligibility											
Family Size Offset	$10,400	$10,400	$10,400	$10,400	$10,400	$10,400	$10,400	$10,400	$10,400	$10,400	$10,400
Federal Taxes (1987):											
Exemptions ($1900)	$7,600	$7,600	$7,600	$7,600	$7,600	$7,600	$7,600	$7,600	$7,600	$7,600	$7,600
Standard Deduction	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760
Taxable Income	-$11,360	-$7,176	-$2,992	$1,192	$5,376	$9,560	$13,744	$17,928	$22,112	$26,296	$30,480
Federal Taxes	$0	$0	$0	$131	$686	$1,316	$1,939	$2,569	$3,119	$3,821	$4,759
State Taxes (8%)	$0	$335	$669	$1,004	$1,339	$1,674	$2,008	$2,343	$2,678	$3,012	$3,347
Discretionary Income	-$10,400	-$6,551	-$2,701	$1,017	$4,311	$7,530	$10,757	$13,976	$17,275	$20,423	$23,334
Family SAI	$0	$0	$0	$112	$474	$879	$1,336	$1,916	$2,669	$3,456	$4,184
Student SAI	$0	$0	$0	$56	$237	$440	$668	$958	$1,334	$1,728	$2,092
Pell Grant:											
Public 2-Year	$1,770	$1,770	$1,770	$1,770	$1,770	$1,750	$1,550	$1,250	$850	$450	$0
Public 4-Year	$2,190	$2,190	$2,190	$2,150	$1,950	$1,750	$1,550	$1,250	$850	$450	$0
Private 4-Year	$2,200	$2,200	$2,200	$2,150	$1,950	$1,750	$1,550	$1,250	$850	$450	$0
Change in Pell Grant											
Public 2-Year	$180	$180	$180	$180	$180	$300	$500	$600	$850	$450	$0
Public 4-Year	$90	$90	$90	$200	$200	$300	$500	$600	$850	$450	$0
Private 4-Year	$100	$100	$100	$200	$200	$300	$500	$600	$850	$450	$0

TABLE A-16:
CHANGE IN PELL GRANT ELIGIBILITY FOR A SINGLE INDEPENDENT APPLICANT AT DIFFERENT INCOME LEVELS AND COLLEGE TYPES BETWEEN 1987-88 AND 1988-89

	Income (1986)													
	$0	$2,000	$4,000	$6,000	$7,000	$8,000	$9,000	$10,000	$11,000	$12,000	$13,000	$14,000	$15,000	$20,000
1987-88 Eligibility														
Family Size Offset	$5,200	$5,200	$5,200	$5,200	$5,200	$5,200	$5,200	$5,200	$5,200	$5,200	$5,200	$5,200	$5,200	$5,200
Federal Taxes (1986):														
Exemptions ($1080)	$1,080	$1,080	$1,080	$1,080	$1,080	$1,080	$1,080	$1,080	$1,080	$1,080	$1,080	$1,080	$1,080	$1,080
Taxable Income	-$1,080	$920	$2,920	$4,920	$5,920	$6,920	$7,920	$8,920	$9,920	$10,920	$11,920	$12,920	$13,920	$18,920
Federal Taxes	$0	$0	$48	$285	$425	$565	$714	$864	$1,022	$1,182	$1,347	$1,527	$1,707	$2,789
Discretionary Income	-$5,200	-$3,200	-$1,248	$515	$1,375	$2,235	$3,086	$3,936	$4,778	$5,618	$6,453	$7,273	$8,093	$12,011
Student SAI	$0	$0	$0	$386	$1,031	$1,676	$2,315	$2,952	$3,584	$4,214	$4,840	$5,455	$6,070	$9,009
Pell Grant:														
Public 2-Year	$1,590	$1,590	$1,590	$1,590	$1,050	$450	$0	$0	$0	$0	$0	$0	$0	$0
Public 4-Year	$2,100	$2,100	$2,100	$1,750	$1,050	$450	$0	$0	$0	$0	$0	$0	$0	$0
Private 4-Year	$2,100	$2,100	$2,100	$1,750	$1,050	$450	$0	$0	$0	$0	$0	$0	$0	$0

	Income (1987)													
	$0	$2,092	$4,184	$6,276	$7,322	$8,368	$9,414	$10,460	$11,506	$12,552	$13,598	$14,644	$15,690	$20,920
1988-89 Eligibility														
Family Size Offset	$5,300	$5,300	$5,300	$5,300	$5,300	$5,300	$5,300	$5,300	$5,300	$5,300	$5,300	$5,300	$5,300	$5,300
Federal Taxes (1987):														
Exemptions ($1900)	$1,900	$1,900	$1,900	$1,900	$1,900	$1,900	$1,900	$1,900	$1,900	$1,900	$1,900	$1,900	$1,900	$1,900
Standard Deduction	$2,540	$2,540	$2,540	$2,540	$2,540	$2,540	$2,540	$2,540	$2,540	$2,540	$2,540	$2,540	$2,540	$2,540
Taxable Income	-$4,440	-$2,348	-$256	$1,836	$2,882	$3,928	$4,974	$6,020	$7,066	$8,112	$9,158	$10,204	$11,250	$16,480
Federal Taxes	$0	$0	$0	$204	$361	$517	$674	$832	$989	$1,147	$1,304	$1,462	$1,612	$2,399
State Taxes (8%)	$0	$167	$335	$502	$586	$669	$753	$837	$920	$1,004	$1,088	$1,172	$1,255	$1,674
Discretionary Income	-$5,300	-$3,375	-$1,451	$270	$1,075	$1,882	$2,687	$3,491	$4,297	$5,101	$5,906	$6,710	$7,523	$11,547
Student SAI	$0	$0	$0	$203	$806	$1,412	$2,015	$2,618	$3,223	$3,826	$4,430	$5,033	$5,642	$8,660
Pell Grant:														
Public 2-Year	$1,770	$1,770	$1,770	$1,770	$1,350	$750	$0	$0	$0	$0	$0	$0	$0	$0
Public 4-Year	$2,190	$2,190	$2,190	$1,950	$1,350	$750	$0	$0	$0	$0	$0	$0	$0	$0
Private 4-Year	$2,200	$2,200	$2,200	$1,950	$1,350	$750	$0	$0	$0	$0	$0	$0	$0	$0
Change in Pell Grant														
Public 2-Year	$180	$180	$180	$180	$300	$300	$0	$0	$0	$0	$0	$0	$0	$0
Public 4-Year	$90	$90	$90	$200	$300	$300	$0	$0	$0	$0	$0	$0	$0	$0
Private 4-Year	$100	$100	$100	$200	$300	$300	$0	$0	$0	$0	$0	$0	$0	$0

TABLE A-17

CHANGE IN PELL GRANT ELIGIBILITY FOR AN INDEPENDENT APPLICANT WHO IS MARRIED, NO CHILDREN AND ONE IN COLLEGE AT DIFFERENT INCOME LEVELS AND COLLEGE TYPES BETWEEN 1987-88 AND 1988-89

	Income (1986)													
	$0	$2,000	$4,000	$6,000	$7,000	$8,000	$9,000	$10,000	$11,000	$12,000	$13,000	$14,000	$15,000	$20,000
1987-88 Eligibility														
Family Size Offset	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500
Federal Taxes (1986):														
Exemptions ($1080)	$2,160	$2,160	$2,160	$2,160	$2,160	$2,160	$2,160	$2,160	$2,160	$2,160	$2,160	$2,160	$2,160	$2,160
Taxable Income	-$2,160	-$160	$1,840	$3,840	$4,840	$5,840	$6,840	$7,840	$8,840	$9,840	$10,840	$11,840	$12,840	$17,840
Federal Taxes	$0	$0	$0	$17	$127	$237	$356	$476	$608	$748	$888	$1,028	$1,168	$1,979
Discretionary Income	-$6,500	-$4,500	-$2,500	-$517	$373	$1,263	$2,144	$3,024	$3,892	$4,752	$5,612	$6,472	$7,332	$11,521
Student SAI	$0	$0	$0	$0	$93	$316	$536	$756	$973	$1,188	$1,403	$1,618	$1,833	$2,880
Pell Grant:														
Public 2-Year	$1,590	$1,590	$1,590	$1,590	$1,590	$1,590	$1,550	$1,350	$1,150	$950	$650	$450	$250	$0
Public 4-Year	$2,100	$2,100	$2,100	$2,100	$2,050	$1,750	$1,550	$1,350	$1,150	$950	$650	$450	$250	$0
Private 4-Year	$2,100	$2,100	$2,100	$2,100	$2,050	$1,750	$1,550	$1,350	$1,150	$950	$650	$450	$250	$0

	Income (1987)													
	$0	$2,092	$4,184	$6,276	$7,322	$8,368	$9,414	$10,460	$11,506	$12,552	$13,598	$14,644	$15,690	$20,920
1988-89 Eligibility														
Family Size Offset	$6,700	$6,700	$6,700	$6,700	$6,700	$6,700	$6,700	$6,700	$6,700	$6,700	$6,700	$6,700	$6,700	$6,700
Federal Taxes (1987):														
Exemptions ($1900)	$3,800	$3,800	$3,800	$3,800	$3,800	$3,800	$3,800	$3,800	$3,800	$3,800	$3,800	$3,800	$3,800	$3,800
Standard Deduction	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760
Taxable Income	-$7,560	-$5,468	-$3,376	-$1,284	-$238	$808	$1,854	$2,900	$3,946	$4,992	$6,038	$7,084	$8,130	$13,360
Federal Taxes	$0	$0	$0	$0	$0	$89	$205	$318	$469	$626	$784	$941	$1,099	$1,886
State Taxes (8%)	$0	$167	$335	$502	$586	$669	$753	$837	$920	$1,004	$1,088	$1,172	$1,255	$1,674
Discretionary Income	-$6,700	-$4,775	-$2,851	-$926	$36	$910	$1,756	$2,605	$3,417	$4,222	$5,026	$5,831	$6,636	$10,660
Student SAI	$0	$0	$0	$0	$27	$683	$1,317	$1,954	$2,563	$3,167	$3,770	$4,373	$4,977	$7,995
Pell Grant:														
Public 2-Year	$1,770	$1,770	$1,770	$1,770	$1,770	$1,550	$850	$250	$0	$0	$0	$0	$0	$0
Public 4-Year	$2,190	$2,190	$2,190	$2,190	$2,150	$1,550	$850	$250	$0	$0	$0	$0	$0	$0
Private 4-Year	$2,200	$2,200	$2,200	$2,200	$2,150	$1,550	$850	$250	$0	$0	$0	$0	$0	$0
Change in Pell Grant														
Public 2-Year	$180	$180	$180	$180	$180	-$40	-$700	-$1,100	-$1,150	-$950	-$650	-$450	-$250	$0
Public 4-Year	$90	$90	$90	$90	$100	-$200	-$700	-$1,100	-$1,150	-$950	-$650	-$450	-$250	$0
Private 4-Year	$100	$100	$100	$100	$100	-$200	-$700	-$1,100	-$1,150	-$950	-$650	-$450	-$250	$0

TABLE A-18

CHANGE IN PELL GRANT ELIGIBILITY FOR AN INDEPENDENT APPLICANT WHO IS MARRIED, WITH ONE CHILD, ONE IN COLLEGE AT DIFFERENT INCOME LEVELS AND COLLEGE TYPES BETWEEN 1987-88 AND 1988-89

	Income (1986)													
	$0	$4,000	$8,000	$10,000	$12,000	$14,000	$16,000	$18,000	$20,000	$22,000	$24,000	$26,000	$28,000	$30,000
1987-88 Eligibility														
Family Size Offset	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000
Federal Taxes (1986):														
Exemptions ($1080)	$3,240	$3,240	$3,240	$3,240	$3,240	$3,240	$3,240	$3,240	$3,240	$3,240	$3,240	$3,240	$3,240	$3,240
Taxable Income	-$3,240	$760	$4,760	$6,760	$8,760	$10,760	$12,760	$14,760	$16,760	$18,760	$20,760	$22,760	$24,760	$26,760
Federal Taxes	$0	$0	$122	$350	$601	$881	$1,161	$1,480	$1,800	$2,150	$2,510	$2,909	$3,349	$3,796
Discretionary Income	-$8,000	-$4,000	-$122	$1,650	$3,399	$5,119	$6,839	$8,520	$10,200	$11,850	$13,490	$15,091	$16,651	$18,204
Student SAI	$0	$0	$0	$413	$850	$1,280	$1,710	$2,130	$2,550	$2,963	$3,373	$3,773	$4,163	$4,551
Pell Grant:														
Public 2-Year	$1,590	$1,590	$1,590	$1,590	$1,250	$850	$350	$0	$0	$0	$0	$0	$0	$0
Public 4-Year	$2,100	$2,100	$2,100	$1,650	$1,250	$850	$350	$0	$0	$0	$0	$0	$0	$0
Private 4-Year	$2,100	$2,100	$2,100	$1,650	$1,250	$850	$350	$0	$0	$0	$0	$0	$0	$0
	Income (1987)													
	$0	$4,184	$8,368	$10,460	$12,552	$14,644	$16,736	$18,828	$20,920	$23,012	$25,104	$27,196	$29,288	$31,380
1988-89 Eligibility														
Family Size Offset	$8,100	$8,100	$8,100	$8,100	$8,100	$8,100	$8,100	$8,100	$8,100	$8,100	$8,100	$8,100	$8,100	$8,100
Federal Taxes (1987):														
Exemptions ($1900)	$5,700	$5,700	$5,700	$5,700	$5,700	$5,700	$5,700	$5,700	$5,700	$5,700	$5,700	$5,700	$5,700	$5,700
Standard Deduction	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760	$3,760
Taxable Income	-$9,460	-$5,276	-$1,092	$1,000	$3,092	$5,184	$7,276	$9,368	$11,460	$13,552	$15,644	$17,736	$19,828	$21,920
Federal Taxes	$0	$0	$0	$109	$341	$656	$971	$1,286	$1,601	$1,916	$2,231	$2,539	$2,854	$3,169
State Taxes (8%)	$0	$335	$669	$837	$1,004	$1,172	$1,339	$1,506	$1,674	$1,841	$2,008	$2,176	$2,343	$2,510
Discretionary Income	-$8,100	-$4,251	-$401	$1,414	$3,107	$4,716	$6,326	$7,936	$9,260	$11,155	$12,765	$14,381	$15,991	$17,601
Student SAI	$0	$0	$0	$156	$342	$519	$722	$932	$1,104	$1,408	$1,698	$1,989	$2,348	$2,750
Pell Grant:														
Public 2-Year	$1,770	$1,770	$1,770	$1,770	$1,770	$1,650	$1,450	$1,250	$1,050	$750	$550	$250	$0	$0
Public 4-Year	$2,190	$2,190	$2,190	$2,050	$1,850	$1,650	$1,450	$1,250	$1,050	$750	$550	$250	$0	$0
Private 4-Year	$2,200	$2,200	$2,200	$2,050	$1,850	$1,650	$1,450	$1,250	$1,050	$750	$550	$250	$0	$0
Change In Pell Grant														
Public 2-Year	$180	$180	$180	$180	$520	$800	$1,100	$1,250	$1,150	$750	$550	$250	$0	$0
Public 4-Year	$90	$90	$90	$400	$600	$800	$1,100	$1,250	$1,150	$750	$550	$250	$0	$0
Private 4-Year	$100	$100	$100	$400	$600	$800	$1,100	$1,250	$1,150	$750	$550	$250	$0	$0

TABLE A-19

CHANGE IN PELL GRANT ELIGIBILITY FOR AN INDEPENDENT APPLICANT WHO IS NOT MARRIED AND HAS A DEPENDENT CHILD AT DIFFERENT INCOME LEVELS AND COLLEGE TYPES BETWEEN 1987-88 AND 1988-89

	Income (1986)													
	$0	$4,000	$8,000	$10,000	$12,000	$14,000	$16,000	$18,000	$20,000	$22,000	$24,000	$26,000	$28,000	$30,000
1987-88 Eligibility														
Family Size Offset	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500
Federal Taxes (1986):														
Exemptions ($1080)	$2,160	$2,160	$2,160	$2,160	$2,160	$2,160	$2,160	$2,160	$2,160	$2,160	$2,160	$2,160	$2,160	$2,160
Taxable Income	-$2,160	$1,840	$5,840	$7,840	$9,840	$11,840	$13,840	$15,840	$17,840	$19,840	$21,840	$23,840	$25,840	$27,840
Federal Taxes	$0	$0	$379	$621	$928	$1,268	$1,619	$1,979	$2,372	$2,779	$3,259	$3,739	$4,238	$4,798
Employment Expense	$0	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
Discretionary Income	-$6,500	-$4,000	-$379	$1,379	$3,072	$4,732	$6,381	$8,021	$9,628	$11,221	$12,741	$14,261	$15,762	$17,202
Student SAI	$0	$0	$0	$345	$768	$1,183	$1,595	$2,005	$2,407	$2,805	$3,185	$3,565	$3,941	$4,301
Pell Grant:														
Public 2-Year	$1,590	$1,590	$1,590	$1,590	$1,350	$950	$550	$0	$0	$0	$0	$0	$0	$0
Public 4-Year	$2,100	$2,100	$2,100	$1,750	$1,350	$950	$550	$0	$0	$0	$0	$0	$0	$0
Private 4-Year	$2,100	$2,100	$2,100	$1,750	$1,350	$950	$550	$0	$0	$0	$0	$0	$0	$0

	Income (1987)													
	$0	$4,184	$8,368	$10,460	$12,552	$14,644	$16,736	$18,828	$20,920	$23,012	$25,104	$27,196	$29,288	$31,380
1988-89 Eligibility														
Family Size Offset	$6,700	$6,700	$6,700	$6,700	$6,700	$6,700	$6,700	$6,700	$6,700	$6,700	$6,700	$6,700	$6,700	$6,700
Federal Taxes (1987):														
Exemptions ($1900)	$3,800	$3,800	$3,800	$3,800	$3,800	$3,800	$3,800	$3,800	$3,800	$3,800	$3,800	$3,800	$3,800	$3,800
Standard Deduction	$2,540	$2,540	$2,540	$2,540	$2,540	$2,540	$2,540	$2,540	$2,540	$2,540	$2,540	$2,540	$2,540	$2,540
Taxable Income	-$6,340	-$2,156	$2,028	$4,120	$6,212	$8,304	$10,396	$12,488	$14,580	$16,672	$18,764	$20,856	$22,948	$25,040
Federal Taxes	$0	$0	$224	$519	$834	$1,149	$1,456	$1,771	$2,086	$2,401	$2,716	$3,031	$3,339	$3,917
State Taxes (8%)	$0	$335	$669	$837	$1,004	$1,172	$1,339	$1,506	$1,674	$1,841	$2,008	$2,176	$2,343	$2,510
Employment Expense	$0	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
Discretionary Income	-$6,700	-$4,351	-$725	$904	$2,514	$4,123	$5,741	$7,351	$8,960	$10,570	$12,180	$13,789	$15,406	$16,753
Student SAI	$0	$0	$0	$99	$277	$454	$646	$856	$1,024	$1,303	$1,592	$1,882	$2,202	$2,538
Pell Grant:														
Public 2-Year	$2,200	$2,200	$2,200	$2,150	$1,950	$1,750	$1,550	$1,350	$1,150	$850	$650	$350	$0	$0
Public 4-Year	$2,200	$2,200	$2,200	$2,150	$1,950	$1,750	$1,550	$1,350	$1,150	$850	$650	$350	$0	$0
Private 4-Year	$2,200	$2,200	$2,200	$2,150	$1,950	$1,750	$1,550	$1,350	$1,150	$850	$650	$350	$0	$0
Change in Pell Grant														
Public 2-Year	$610	$610	$610	$560	$600	$800	$1,000	$1,350	$1,150	$850	$650	$350	$0	$0
Public 4-Year	$100	$100	$100	$400	$600	$800	$1,000	$1,350	$1,150	$850	$650	$350	$0	$0
Private 4-Year	$100	$100	$100	$400	$600	$800	$1,000	$1,350	$1,150	$850	$650	$350	$0	$0

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Attitudes of Americans Toward Borrowing to Finance Educational Expenses 1959-1983

Thomas G. Mortenson

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ATTITUDES OF AMERICANS TOWARD BORROWING TO FINANCE EDUCATIONAL EXPENSES
1959-1983

Thomas G. Mortenson

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ABSTRACT

This study analyzes data on the attitudes of Americans toward borrowing to finance educational expenses between 1959 and 1983. The impetus for the study was interest in the effects of the federal government's shift in student aid emphasis from grants to loans in the financing of college attendance costs during this period. Of interest is the concurrent decline in college enrollment rates for some portions of the U. S. population. The data used to examine these questions in this study were obtained from surveys of consumer finances collected for the Federal Reserve System.

The study shows that Americans express a high degree of willingness to borrow to finance educational expenses. Over the twenty-four year period for which data are available, educational loans have consistently been viewed favorably by 70 percent to 85 percent of Americans. Education, along with cars and medical expenses, is viewed as one of the three most worthy reasons for borrowing money.

However, not all groups of Americans are favorably inclined to borrow to finance educational expenses. For example, some groups such as women, older persons, persons from selected occupations, the less educated, those from low household income, and Hispanics are less favorably disposed, on average, to borrow.

The relationship between attitude and behavior has been studied by social psychologists, and a significant link between attitude and behavior has been identified. Such research has not been conducted in the area of borrowing to finance educational expenses, however. Under the conditions in which attitude influences behavior, the differences in attitudes about student loans among different portions of the population suggest that loans may not be equally effective in meeting educational equity aims of financial aid for all aid applicants. A more comprehensive modeling of student enrollment and default behavior with respect to educational borrowing is suggested. This research would address precollegiate conditions (including attitude), collegiate experiences, and postcollegiate job experience.

If higher educational enrollment equity aims are to continue to be pursued through student financial aid, then known differences in attitudes should be reflected in public policy, especially if those differences in attitudes are believed to adversely affect the intended outcome of the financial aid program. Public policy choices could include attempting to change attitudes about borrowing among groups reluctant to finance attendance costs through loans. Other choices could be to improve existing programs of grants or to develop additional alternatives to loans that are more acceptable to aid applicants.

ACKNOWLEDGMENTS

This research project became possible when Gregory Elliehausen of the Federal Reserve System provided copies of the 1977 and 1983 Surveys of Consumer Finances for this project. John Ferraro of the Federal Reserve System staff prepared data tapes and provided detailed documentation. These tapes were analyzed at ACT through the programming efforts of Clarence Kreiter. Clarence and Terry McNabb provided assistance in the interpretation of the attitude-behavior research literature crucial to linking the survey data with the problems of using educational loans to meet the financial needs of all kinds of students. Mark Heffron and Richard Ferguson provided helpful comments on drafts of this paper. I am grateful to these people for their assistance in this study.

ATTITUDES OF AMERICANS TOWARD BORROWING TO FINANCE EDUCATIONAL EXPENSES
1959-1983

Thomas G. Mortenson

Introduction

This paper examines Americans' attitudes about the use of loans to help students and their families finance the students' postsecondary educations. Specifically, this study analyzes the results of surveys of Americans in 1959, 1967, 1970, 1977 and 1983 about their attitudes toward borrowing to finance their educational expenses. Data used in this study were collected for studies of consumer finances by the Federal Reserve System.

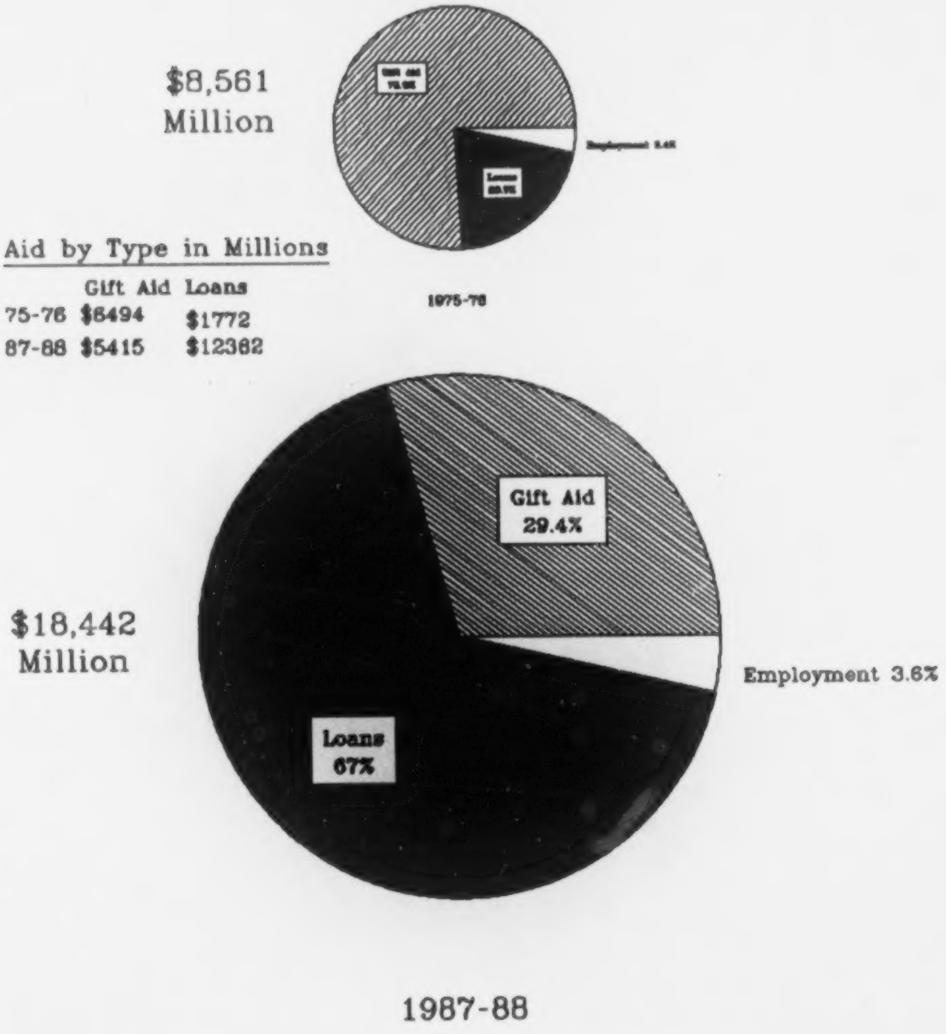
This study extends earlier research on the use of loans to help students finance their college attendance costs by examining data on the evolution of attitudes toward borrowing by groups reflecting various population characteristics. These characteristics include gender, age, occupation, educational attainment, income, and race/ethnicity. As a part of the study, the social psychology research literature on the link between attitude and behavior was examined. In so doing, the study seeks to identify those for whom loans are and others for whom loans are not adequate means of helping students finance college attendance costs. A concluding section compares the characteristics of those with negative attitudes toward borrowing to finance educational expenses with characteristics of student borrowers who default in repaying their student loans.

The Public Policy Issues

With the adoption of the Higher Education Act of 1965, the federal government has sought to assist students with financial need to pay for their higher educations. The federal purpose of this assistance has been to equalize higher educational opportunity for individuals without the financial resources to pay for college on their own (Gladieux and Wolanin, 1976). This federal assistance has taken a variety of forms, including grants, work-study, and loans. Funding through Title IV of the federal Higher Education Act has grown substantially, although much of this growth has been offset by increasing college attendance costs and declines in other forms of federal financial aid to college students, e.g., Social Security survivor's benefits and Veteran's educational benefits. Currently about 75 percent of all student aid is provided through federal programs (Lewis, 1988).

While the total amount of funding has increased, in recent years the form of federal financial aid available to students has shifted notably from gift aid to loans. In 1975-76, the proportion of federal student aid provided through gift aid was 76 percent, while loans constituted 21 percent. By 1987-88, the proportions have nearly reversed: 29 percent gift aid compared to 67 percent loans. This shift is highlighted in Figure 1 and is detailed in Appendix Table A-1.

FIGURE 1
FEDERAL STUDENT FINANCIAL AID BY TYPE
1975-76 AND 1987-88



Aid by Type in Millions

	Gift Aid	Loans
75-76	$6494	$1772
87-88	$5415	$12362

Source: See Appendix Table A-1.

Concurrently with the shift in federal student aid emphasis from grants to loans, a number of public policy concerns have arisen in U. S. higher education. These issues are sometimes discussed as by-products of this shift.

- Since the late 1970s, when federal student aid was refocused from grants to loans, the college entrance rate for recent white high school graduates has increased, while the college entrance rate for nonwhites has decreased (Mortenson, 1987).
- Student loan defaults have increased, with concomitant increased lender reimbursement costs to the federal government as a result of the federal guarantee to the lender (Office of Management and Budget, 1988).
- Accumulated indebtedness and loan repayment obligations may affect student plans for post-baccalaureate/professional study, career choice, consumption, and life-style options, including marriage, children, and geographic location. These questions tend to redefine the purpose of higher education in ways important to the American future (Newman, 1985).

Loans, nevertheless, have provided an important vehicle for a growing number of students who need help to finance their college attendance costs. For these students, loans appear to be an essential, successful, and relatively inexpensive form of aid; they achieve their objective of enabling many students and their families to finance the college attendance costs they face.

Research on Effects of Loans on Enrollment Behavior

Carlson observed in 1974 that in the then-current policy debate over alternative strategies for federal and state financing of higher education, the primary focus of the discussion was on institutional versus student aid. The former addressed student gross-price issues such as tuition and enrollment response to different tuition levels that would result from different levels of institutional funding. The latter addressed student net-price issues, such as the enrollment response to different aid funding levels. The latter point, he observed, did not address the issue of the form that student financial aid would take: grants, loans, work-study. As a result, Carlson collected and reanalyzed data from several student surveys, including attitudinal surveys, to determine student enrollment response to alternative higher educational financing strategies, including the level and form in which student aid was provided.

Carlson's work, although dated, is the only analysis available pertinent to the issue of the effectiveness of loans for financing college attendance costs. A recent review of the literature (Hansen, 1987) concluded: "Hard evidence to support or refute this concern (about the effects of the balance between loans and grants on equality of educational opportunity) is unfortunately difficult to find."

Carlson adopted the "student price response coefficient" (SPRC) as the measure of enrollment change resulting from price change. The SPRC is the percent change in enrollment due to a $100 change in net price of attendance (in terms of 1973 dollars). Carlson calculated direct enrollment effects (access) on student enrollment behavior, and his direct student price response coefficients are summarized in Table 1 (Carlson, 1974).

TABLE 1

Direct Student Price Response Coefficients
by Institutional Type, Family Income Level, and Aid Form
(1973 Dollars)

Institutional Type	Family Income	Tuition	Grants		Work-Study	Loans
			Max.	No-Max		
Public	Low	2.45	2.17	2.14	.99	1.17
	Middle	1.16	.24	1.90	.19	.30
	High	.87	-	.62	.02	.03
Private	Low	4.28	3.40	2.40	2.00	1.88
	Middle	1.38	.30	2.35	.38	.54
	High	.73	-	1.98	.04	.08

The above table provides important insights about the effects of price and financial aid on low income students. First, it shows that potential college students from low income families are more responsive to price and net price than are potential students from middle and high income families, regardless of institutional type or aid form. Second, it indicates that for low income individuals, tuition and grant subsidies have about twice the enrollment benefits of loans or work-study. Third, the data show that tuition and financial aid are more important to potential private institutional enrollment than to enrollment in a public institution. In summary, Carlson's data indicate that low income individuals' college access and choice decisions are sensitive to tuition levels, the availability of student aid, and the forms in which that aid is made available.

Attitude and Behavior

This study has relevance for public policy only insofar as students' attitudes about various forms of aid influence their behavior. The basic question is: "Do the attitudes of some students about loans alter their enrollment decisions of access, choice and/or persistence?" To the extent that behavior in these areas does mirror attitude, the findings of this study are highly significant.

Social psychologists have examined similar questions for decades, though not specific to the educational loan area. The evolution of attitude-behavior research has several benchmarks. In the 1930s, social psychologists were surprised to discover no correlation between attitude and behavior. Later, improved experimental design produced more noteworthy correlations. These studies were distilled into models in the 1960s and 1970s, the most widely cited of which is known as the Fishbein-Ajzen (1977) model. More recently, criticism of the parsiminous structure of this model led to the proposal of more complex models (Liska, 1984). The more inclusive models of the attitude-behavior relationship now call for the addition of factors such as opportunity and resources. These models offer the expectations both for a higher proportion of variance explained by such modeling than was previously the case, as well as the chance to isolate the effect of attitude from other conditions that influence behavior.

The progress by social psychologists in modeling the attitude-behavior relationship has been noted by Piliavan (1981). Empirical attitude-behavior studies report correlations in the range of .4 to .8, with notably higher correlations found in laboratory studies than field studies, and higher correlations in both for studies conducted after 1968. In the more recent studies, a positive attitude-behavior relationship was found in 55 percent of field studies and 92 percent of lab studies.

These correlations, and the progress made to date in the specification of the attitude-behavior relationship, suggest some caution in the interpretation and application of the following data. First, the data collected in the Federal Reserve System surveys presented the interviewee with a hypothetical situation - not one where the interviewee was actually confronted with the reality of taking out an education loan or not being able to attend college. Second, while progress has been made by social psychologists in studying attitude and behavior, quite likely more remains to be discovered about the circumstances under which attitude influences behavior. Third, and related to the above qualifications, college freshmen provide quite clear and consistent economic and social objectives for attending college. These reasons are almost certainly derived from the same individual welfare maximization utility functions that condition attitude prior to decision time.

In this sense, this study does not provide a definitive answer about what kinds of Americans can be expected to profitably use loans to finance educational attendance costs, and what other kinds of Americans cannot be helped by student loans. Such a study is suggested on the final page of this report. Rather, this study is suggestive of where loans may not be as readily accepted as they may be elsewhere. Where such reluctance may be encountered, as suggested by the Federal Reserve System data, those who make and execute student aid policy should be especially sensitive to how student loans are viewed by potential aid recipients so that their enrollment decisions of access, choice, and persistence are not adversely affected.

Research Design

The Data

This study examined existing historical data from files of the Federal Reserve System. The Federal Reserve has collected data periodically for the purpose of studying consumer finances in the U. S. The surveys were conducted by the Survey Research Center at the University of Michigan. Nationally representative samples of the population were drawn to permit the analysis of consumer finances of various subpopulations of the U. S. Data used here were taken from surveys of national samples of the American population in 1959, 1967, 1970, 1977 and 1983. Copies of the 1977 and 1983 files were provided by Federal Reserve staff for more detailed analyses. Data reported in this paper from the three prior years were taken from previously published reports.

Each participant surveyed in this study was asked the following central question:

> "People have many different reasons for borrowing money which they pay back over a period of time. Would you say that it is all right for someone like yourself to borrow money:
>
> for expenses of a vacation trip?
> for living expenses when income is cut?
> to consolidate bills which have piled up?
> to finance the purchase of a fur coat or jewelry?
> to finance boats, snowmobiles and other hobby equipment?
> to finance the purchase of a car?
> for expenses due to an illness?
> to finance educational expenses?
> to finance the purchase of furniture?"

(The response for boats/snowmobiles/hobby equipment was first used in the 1977 survey.)

The Analysis

The data available in the Federal Reserve System studies were largely cross-tabulated to produce the results graphed on the following pages. Additional analyses through correlation, discriminate analysis, and multiple regression were largely unsuccessful in producing results which added useful insight and were statistically significant.

In retrospect, the failure of these additional analyses was largely due to the lack of focus in the Federal Reserve System data on the question that is the central issue of this study. Our interests in analyzing this data were incidental to theirs. Despite this limitation, the findings are highly suggestive and are therefore presented here as a contribution to the public policy consideration of issues related to the effectiveness of student loans in achieving higher educational equity of opportunity and to the issue of student loan defaults.

Findings

Willingness to Borrow for Various Purposes

In addition to willingness to borrow to finance educational expenses, survey participants were asked to indicate their willingness to finance other purchases of goods, services, or activities. The willingness of 1983 survey respondents to finance these purchases is shown in Figure 2 on the following page.

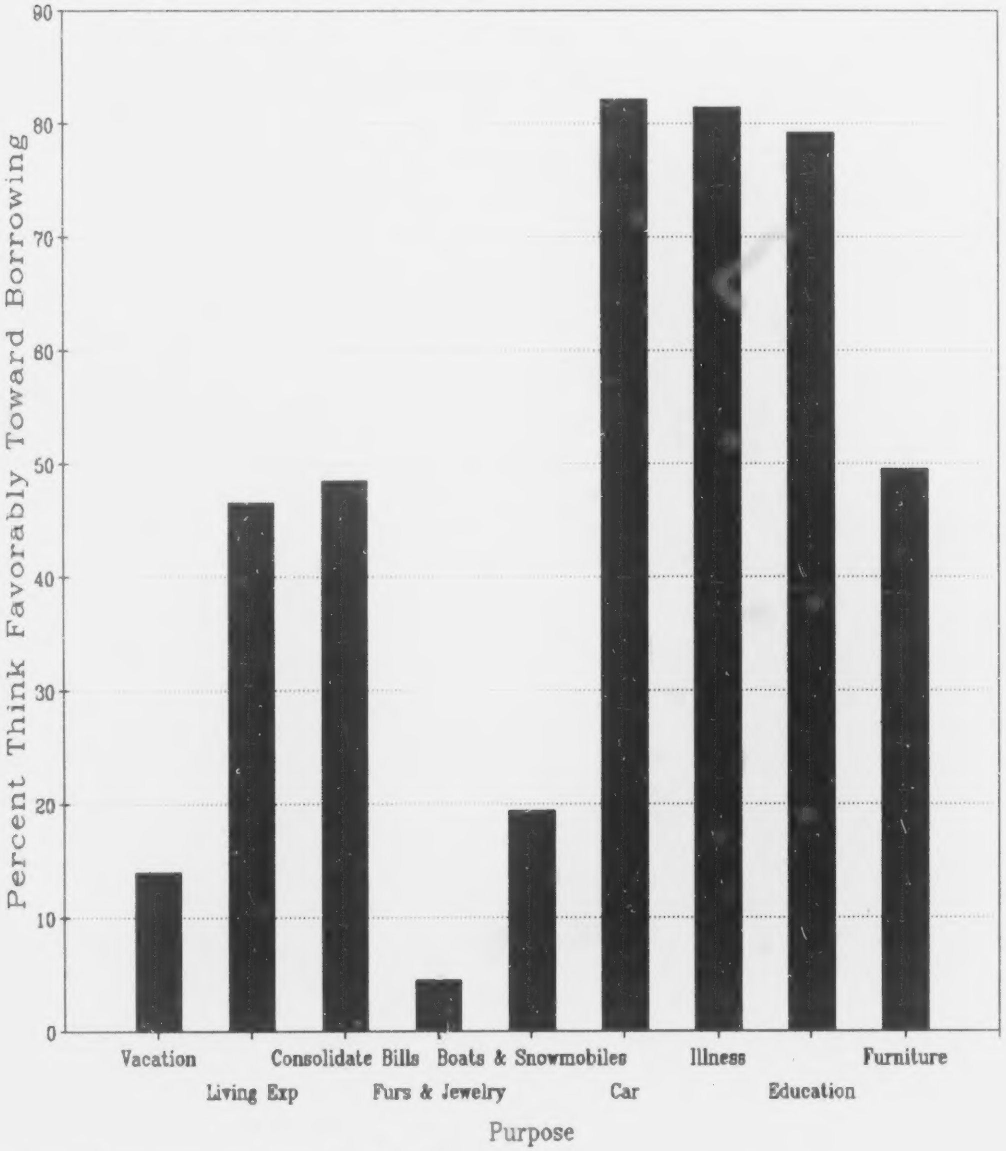
Figure 2 shows a very wide range in willingness to borrow, from a low of 5 percent to purchase furs and jewelry to a high of 82 percent to purchase a car and pay medical bills. The responses to choices presented survey participants may be grouped into three levels. The set of goods and services that survey participants were least willing to borrow to purchase or finance were furs and jewelry, vacation, and boats and snowmobiles. At the intermediate level, where roughly half were willing to borrow, were living expenses, consolidation of bills, and purchase of furniture. At the highest level, where about 80 percent of survey participants were willing to borrow, were education, expenses of illness, and purchase a car.

Figure 3 shows these relationships over time. Generally, over the period of twenty-four years from 1959 to 1983, survey respondents reflected similar priorities. The three most important reasons for borrowing in 1983 were also the most important reasons in 1959, 1967, 1970 and 1977. Similarly, the middle group was unchanged, and the lowest group had always been lowest.

With only a few minor exceptions, Americans' willingness to borrow for these different purposes remained quite stable between 1959 and 1983. Over the twenty-four year period studied, Americans' willingness to borrow increased mainly to pay living costs and to buy cars. Americans were less willing to borrow to pay medical costs in 1983 than they were in 1959.

Table 2 breaks down these responses by constant dollar household income ranges for the years 1959, 1967, 1977 and 1983. Individuals from the middle and upper household income ranges provide survey responses that are more similar to each other than either is to the lowest income group. Among the lowest household incomes, not only is there less willingness to borrow for any purpose, but also a shift in priorities. In 1983, for example, 74 percent of the lowest income group expressed support for borrowing to finance educational expenses, compared to 86 percent and 87 percent for the middle and upper income groups, respectively. The highest borrowing priority for the lowest income group was for expenses incurred during illness, while the highest priority for the middle and upper income groups was to finance the purchase of a car.

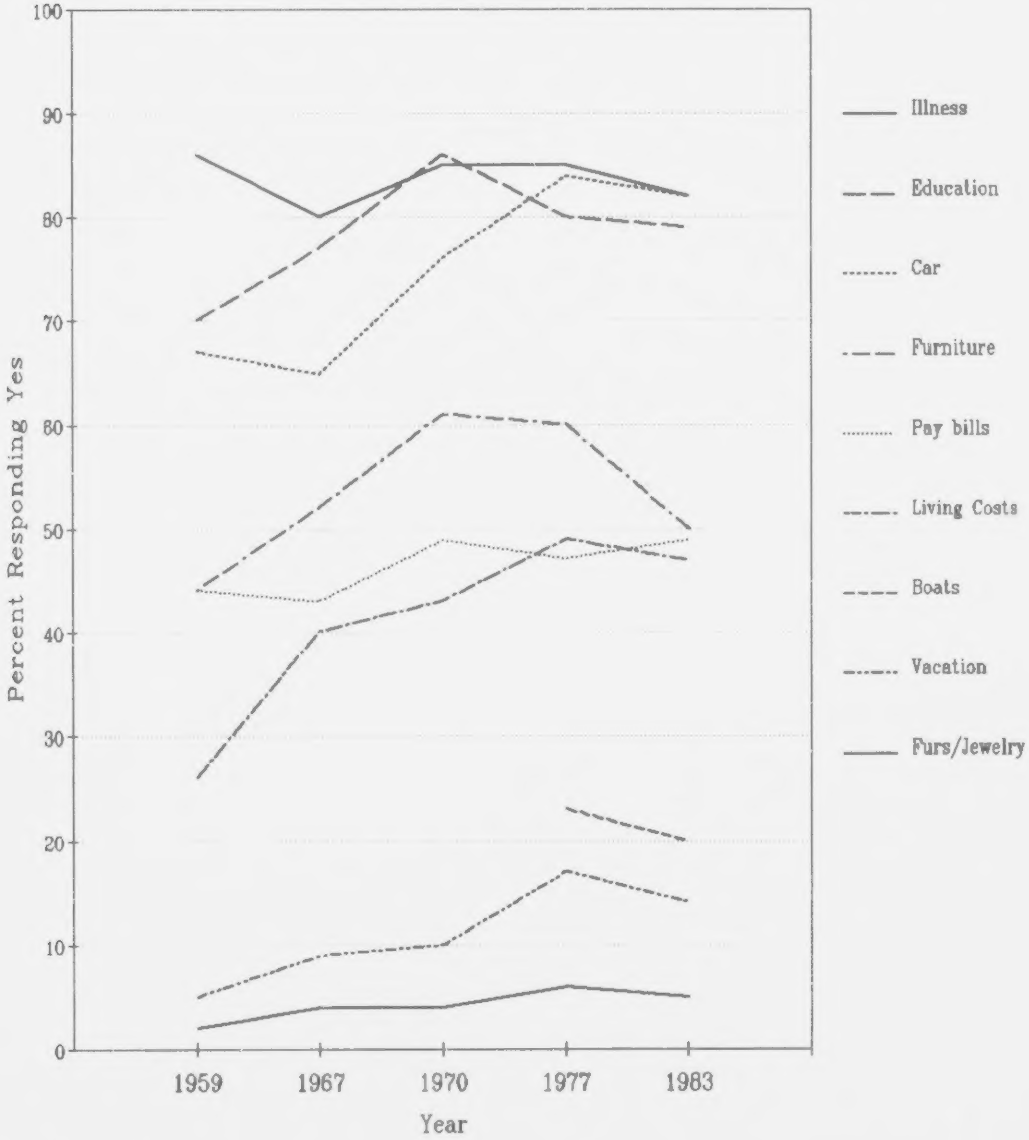
FIGURE 2
WILLINGNESS TO BORROW FOR VARIOUS PURPOSES
1983



Source: 1983 Survey of Consumer Finances, Federal Reserve System

FIGURE 3

People have many different reasons for borrowing money which they pay back over a period of time. Would you say that it is all right for someone like yourself to borrow money for ... (1959-1983)



Source: Surveys of Consumer Finances, Federal Reserve System.

TABLE 2

Percent Think Favorably Toward Borrowing for Various Purposes by Household Income and Year 1959, 1967, 1977, 1983 (in constant 1983 dollars)

	Household Income											
Appropriate to	$0-$25,553				$25,554-$34,070				Over $34,070			
borrow for:	1959	1967	1977	1983	1959	1967	1977	1983	1959	1967	1977	1983
Illness expenses	86%	77%	84%	81%	86%	84%	86%	82%	85%	86%	86%	86%
Educational expenses	66	72	75	74	81	82	87	86	83	88	87	87
Purchase a car	67	56	79	77	74	79	93	90	61	80	91	91
Purchase furniture	44	48	56	46	49	61	66	58	41	58	66	55
Pay bills	45	44	48	52	39	43	50	46	40	40	41	43
Cover living expense	27	40	49	50	21	40	50	44	23	41	49	41
Vacation expenses	5	8	15	16	8	10	21	15	5	13	20	16
Buy fur coat/jewelry	2	4	5	4	3	4	6	5	3	7	8	7
Buy boat/snowmobile	-	-	18	15	-	-	28	26	-	-	33	30

Note: In 1983, median U. S. household income was $21,018.

Willingness to Borrow to Finance Educational Expenses

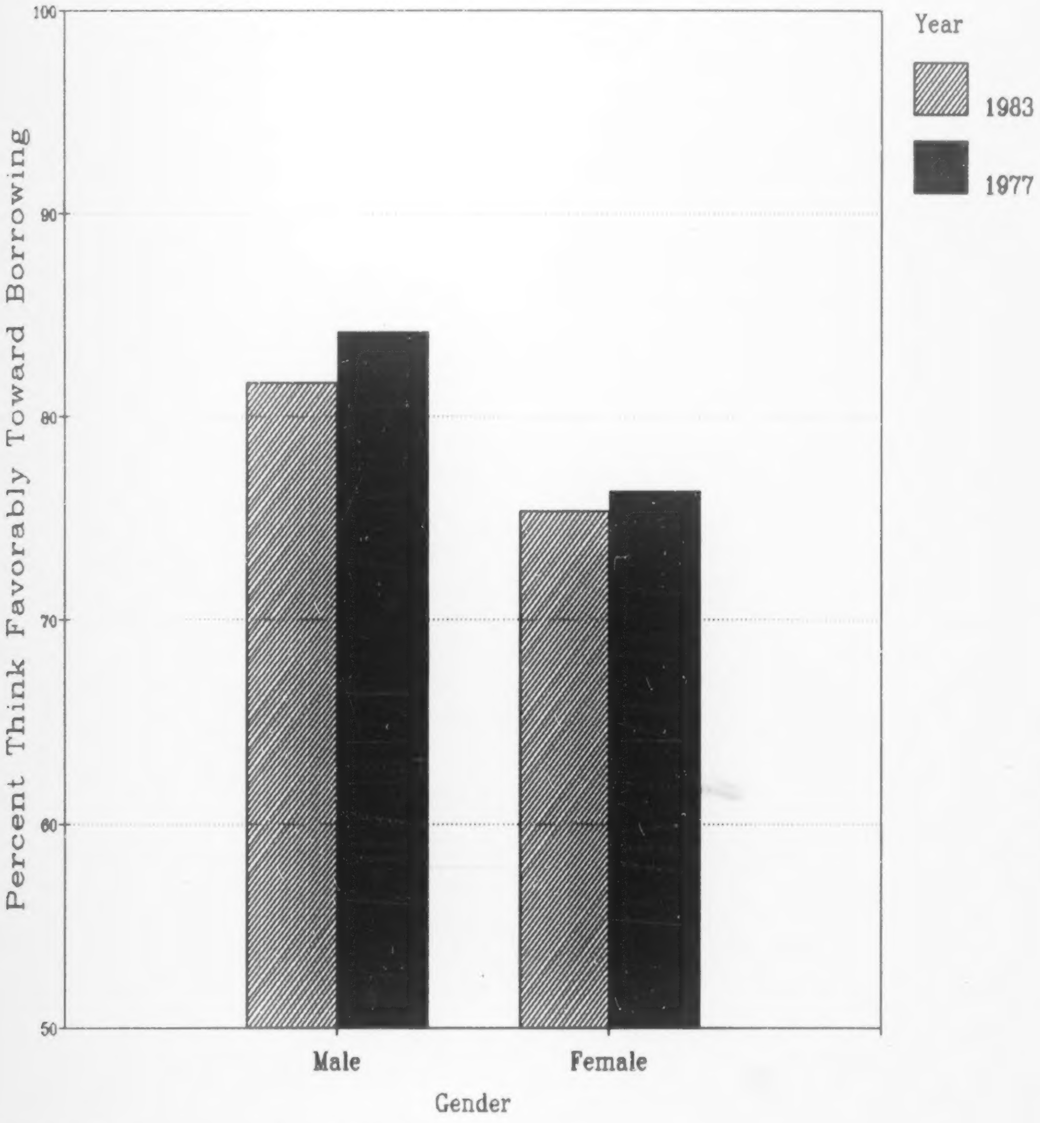
Americans' willingness to borrow for college may be described in terms of individual demographic characteristics that are relevant to student financial aid policy. We use the following demographic and economic descriptors and some of their interactions.

Gender: Figure 4 shows Americans' willingness to borrow for educational expenses by gender. Generally, men report greater willingness to borrow money for this purpose than do women. In 1983, 82 percent of the men and 75 percent of the women reported a favorable attitude.

Age: Figure 5 shows Americans' willingness to borrow by age of survey respondent in 1977 and 1983. Clearly, younger Americans were more willing to borrow to finance educational expenditures than were older Americans. Nearly 90 percent of those less than 25 thought borrowing for education was a good idea, compared to less than 60 percent for those 65 are over. Figure 5 shows that this pattern changed little between 1977 and 1983.

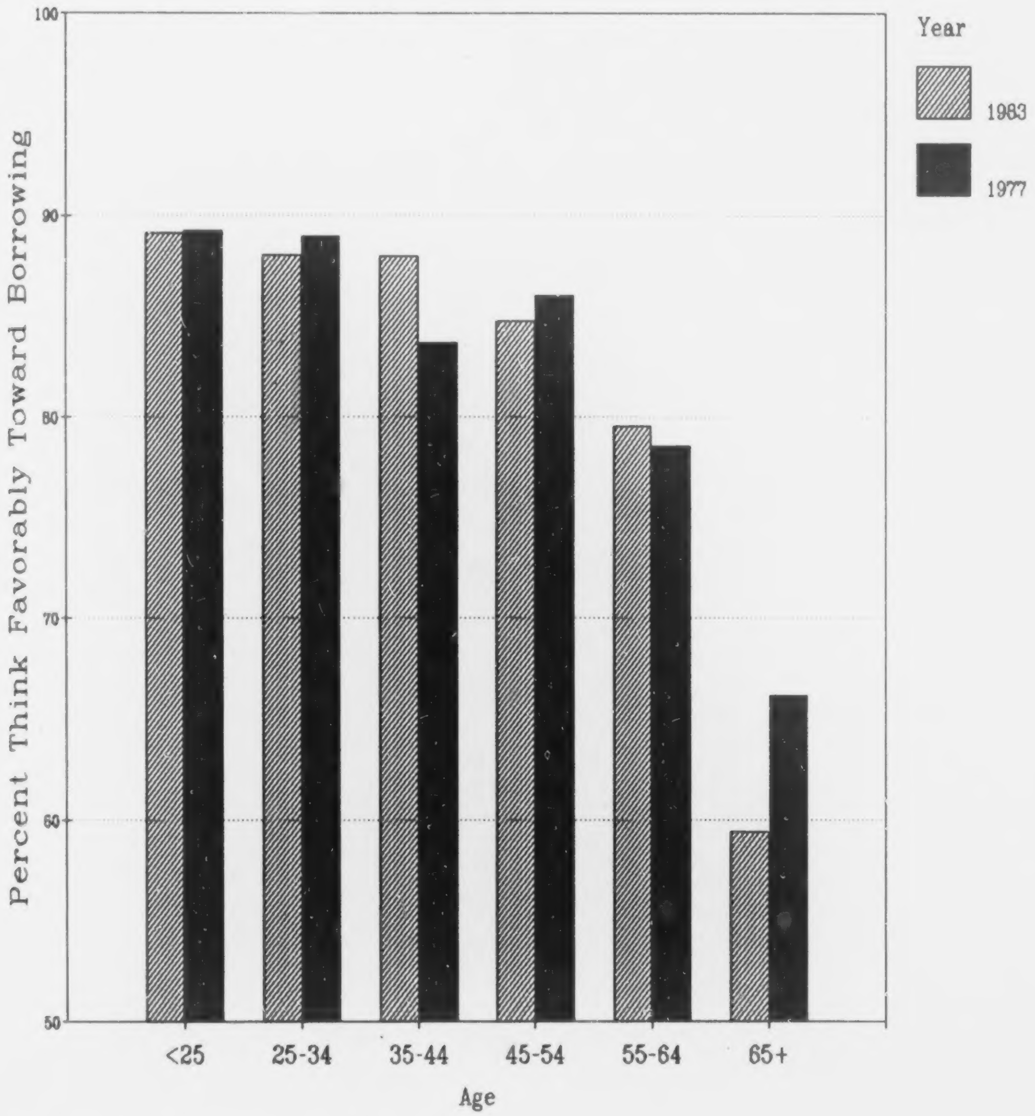
Occupation: Figure 6 shows the proportion of individuals in different occupations who thought borrowing for education was a good idea in 1983. Generally, professionals and others likely to have education beyond high school were more favorably disposed. Laborers were least likely to think borrowing for education was a good idea, but even in this group 75 percent

FIGURE 4
WILLINGNESS TO BORROW FOR EDUCATIONAL EXPENSES BY GENDER
1983 AND 1977



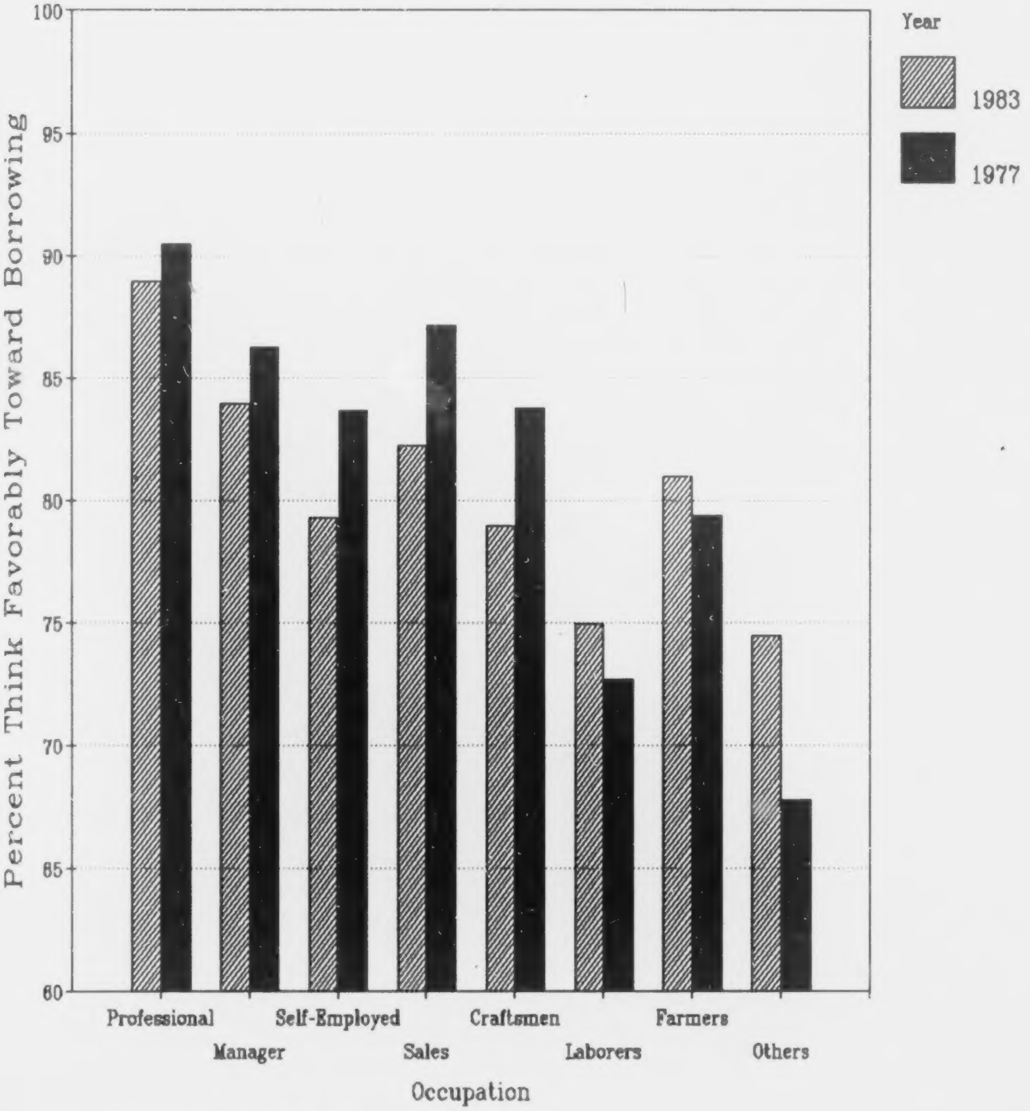
Source: Survey of Consumer Finances, Federal Reserve System.

FIGURE 5
WILLINGNESS TO BORROW FOR EDUCATIONAL EXPENSES
BY AGE
1983 AND 1977



Source: Survey of Consumer Finances, Federal Reserve System

FIGURE 6
WILLINGNESS TO BORROW FOR EDUCATIONAL EXPENSES
BY OCCUPATION
1977-1983



Source: Survey of Consumer Finances, Federal Reserve System

thought favorably. Notably, while attitudes toward borrowing for education became less favorable between 1977 and 1983 in most occupations, they became more favorable for laborers and farmers -- two groups hit hard by recession during the early 1980s.

Educational attainment: Figure 7 shows the proportion of individuals at different levels of educational attainment in 1977 and 1983 who thought borrowing to finance educational expenses was a good idea. The strong relationship between educational attainment and willingness to borrow for education is evident. Those with least education (like the oldest in Figure 4), showed the greatest decline in willingness to borrow for education between 1977 and 1983. Those with some college showed an improved attitude toward educational loans.

Income: Figure 8 shows the proportion of survey respondents from different household income intervals in 1983 that viewed educational loans favorably. Figure 9 shows similar data from the 1977 survey. These results are both striking and relevant to student aid policy because need for aid is negatively related to income. The group that thinks least favorably toward loans is the lowest income population. Whereas 85 percent to 89 percent of those from incomes above $18,000 viewed student loans favorably in 1983, only about 62 percent of those from incomes in the $4000 to $6000 range shared that view. Figure 10 shows these data back to 1959 in the constant dollar income intervals shown in Table 2.

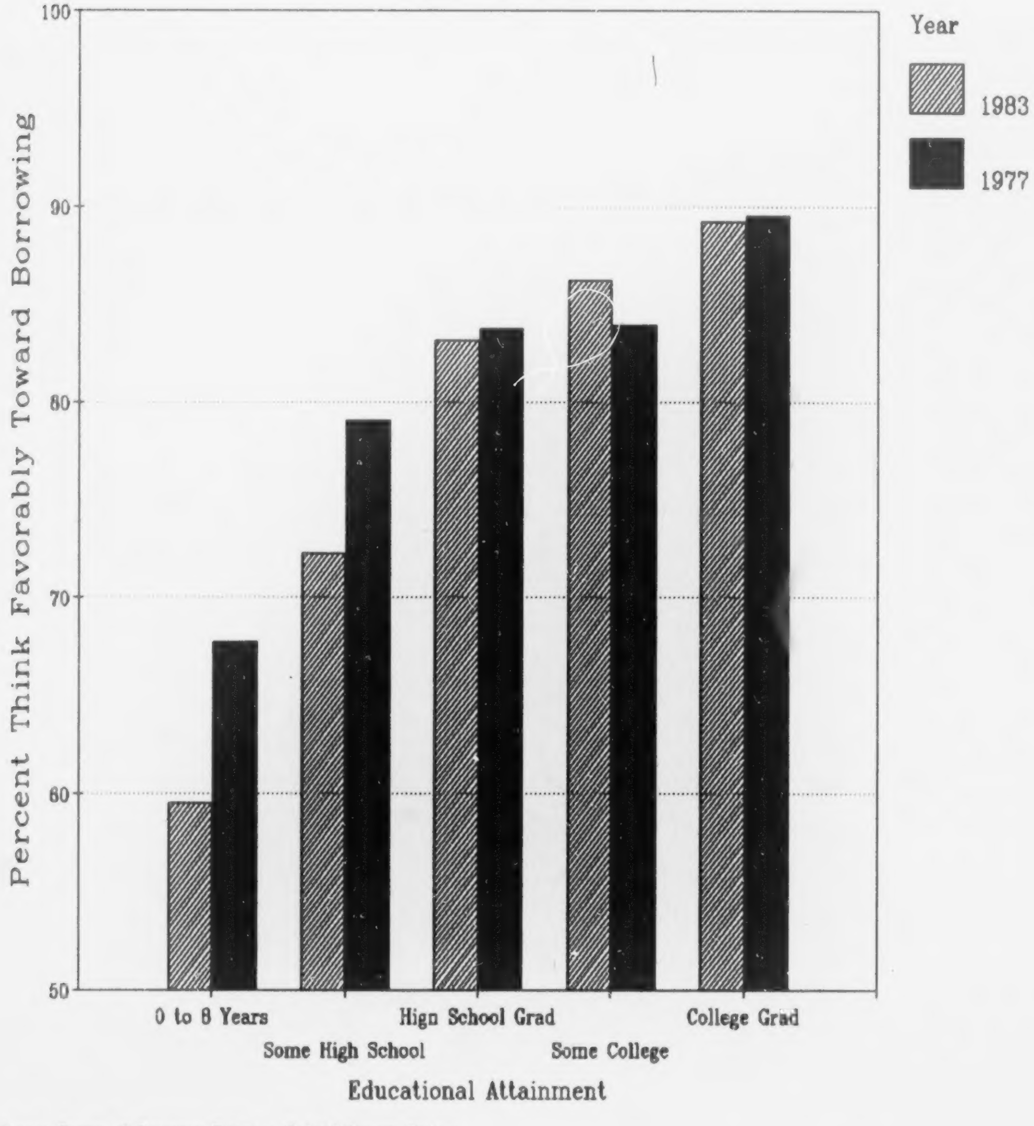
Race: Figure 11 plots the attitude toward educational borrowing by major racial/ethnic category. By 1983, blacks and whites had the most favorable attitudes toward educational loans; about 81 percent of each group had favorable attitudes. Hispanics hold these loans least favorably -- 72 percent positive. Moreover, between 1977 and 1983, the proportion of Hispanics reporting a positive attitude toward educational loans dropped from 85 percent to 72 percent.

Income and race: The interaction of income and race offers still more insight into attitudes toward educational loans, as shown in Figure 12. Controlling for income in the 1983 survey, at each level of income through $52,000 per year, blacks view student loans most favorably and Hispanics least favorably. For all three groups, the percent of survey respondents who gave a favorable response to student loans increased with income. White survey respondents stood between these two groups at each income interval.

Americans have a generally positive attitude toward borrowing to finance educational expenses. Four out of five Americans indicate that they have a favorable attitude toward borrowing for this purpose. Moreover, borrowing to finance educational expenses has remained a top priority for Americans for over two decades.

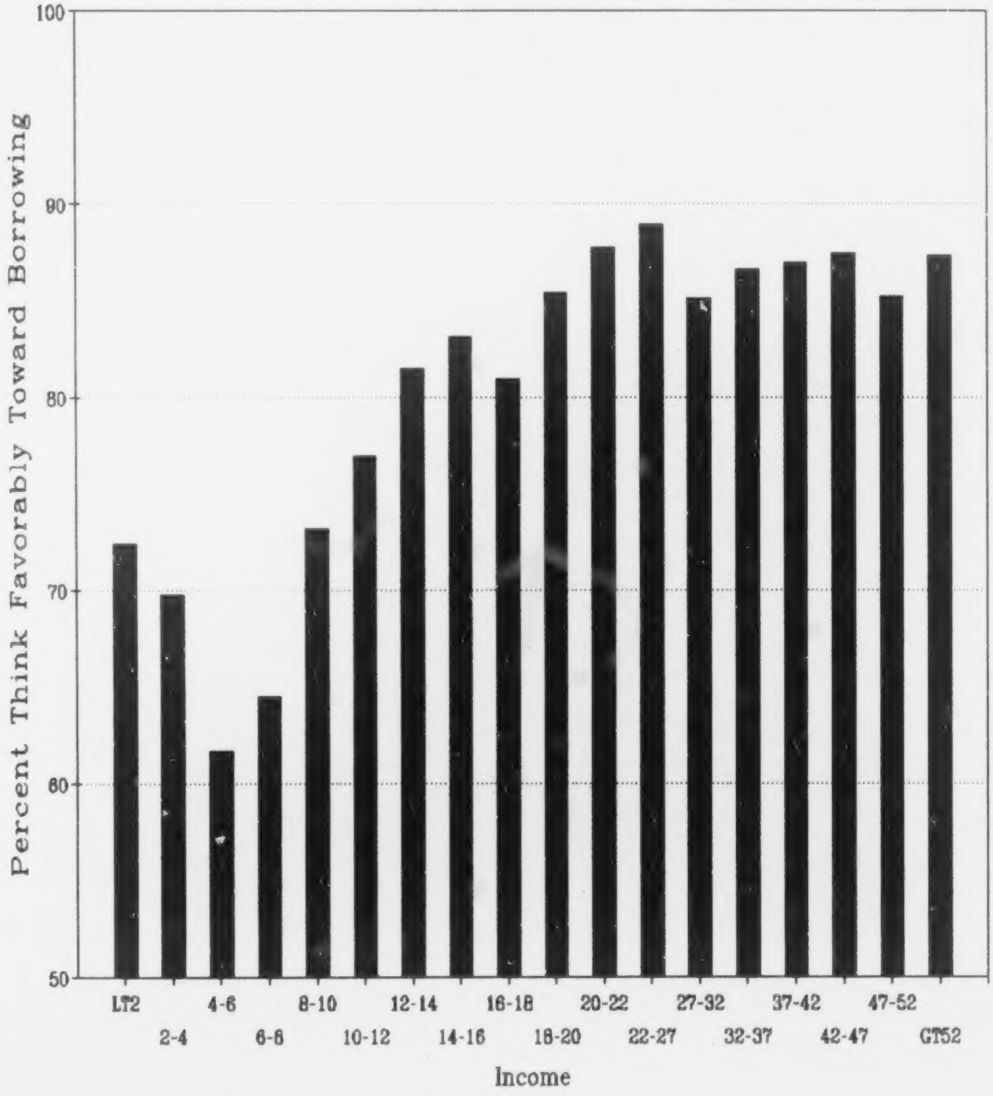
When demographically defined subgroups of the population are considered, the proportion of survey respondents reporting favorable attitudes toward educational loans climbs close to 90 percent. The groups with the highest proportion of respondents having favorable attitudes include constituencies traditionally important to higher education. These include

FIGURE 7
WILLINGNESS TO BORROW FOR EDUCATIONAL EXPENSES BY EDUCATIONAL ATTAINMENT 1983 AND 1977



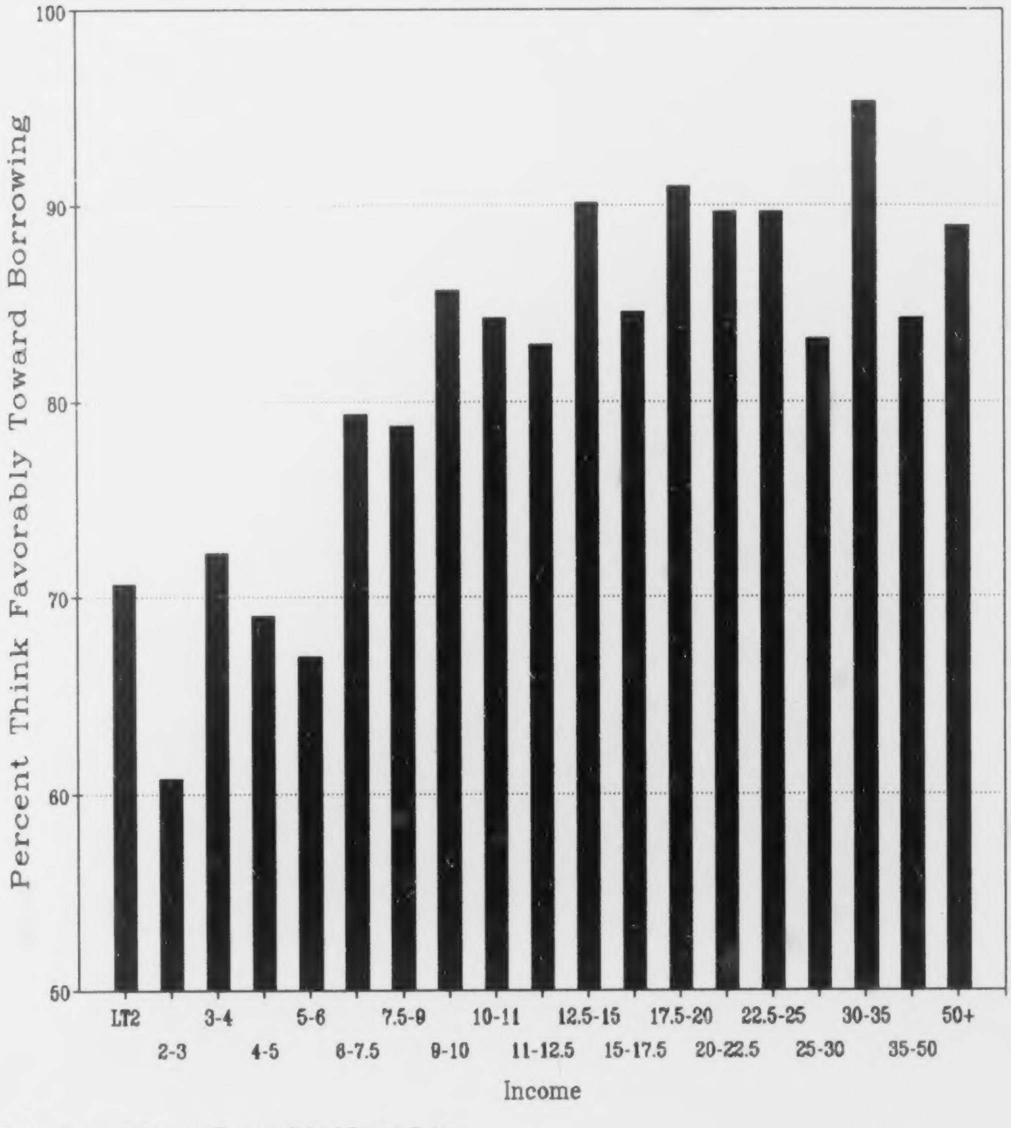
Source: Survey of Consumer Finances, Federal Reserve System.

FIGURE 8
WILLINGNESS TO BORROW FOR EDUCATIONAL EXPENSES BY INCOME
1983



Source: Survey of Consumer Finances, Federal Reserve System

FIGURE 9
WILLINGNESS TO BORROW FOR EDUCATIONAL EXPENSES BY INCOME
1977



Source: Survey of Consumer Finances, Federal Reserve System

FIGURE 10
WILLINGNESS TO BORROW FOR EDUCATIONAL EXPENSES BY HOUSEHOLD INCOME INTERVALS 1959, 1967, 1977 AND 1983

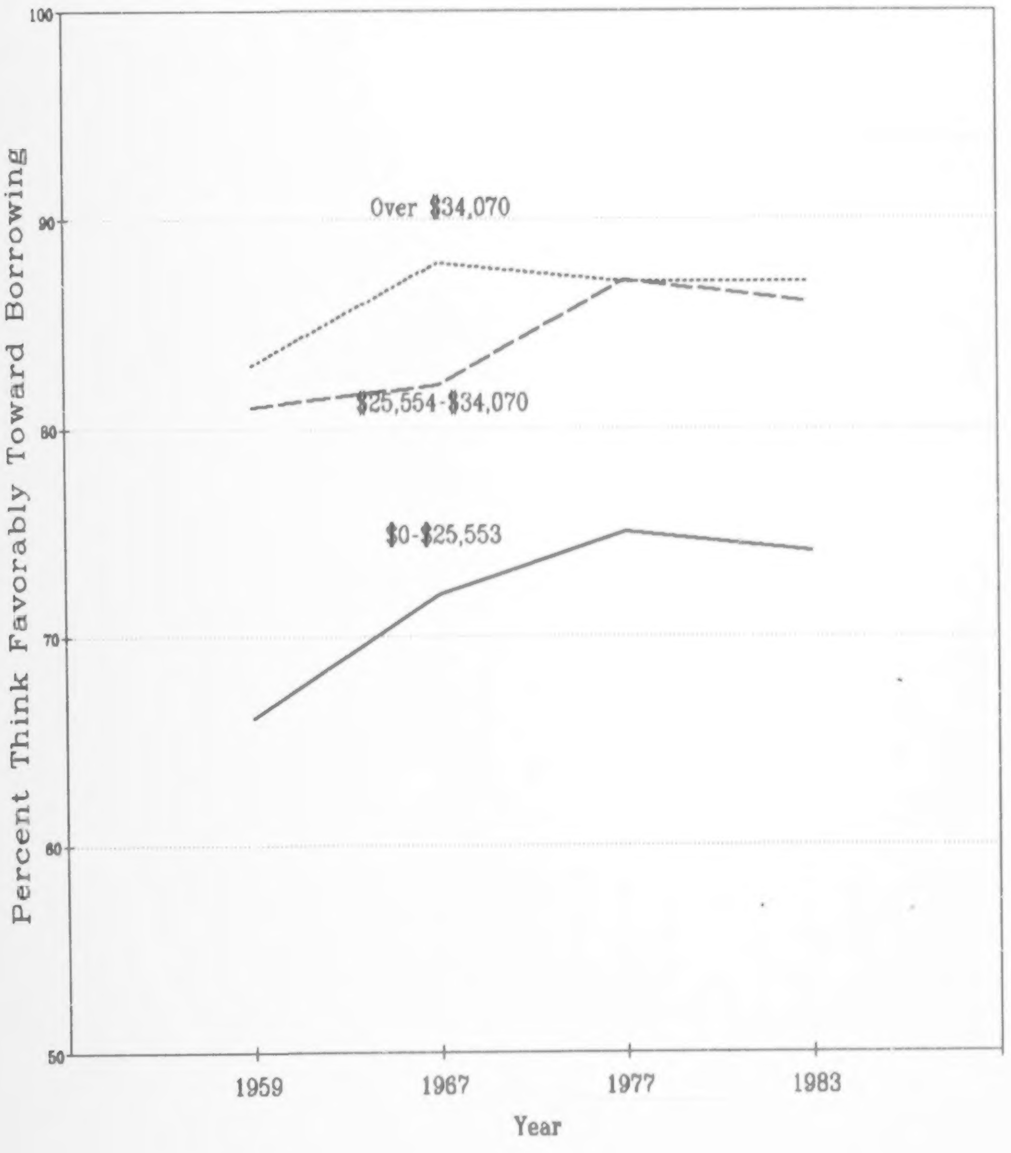
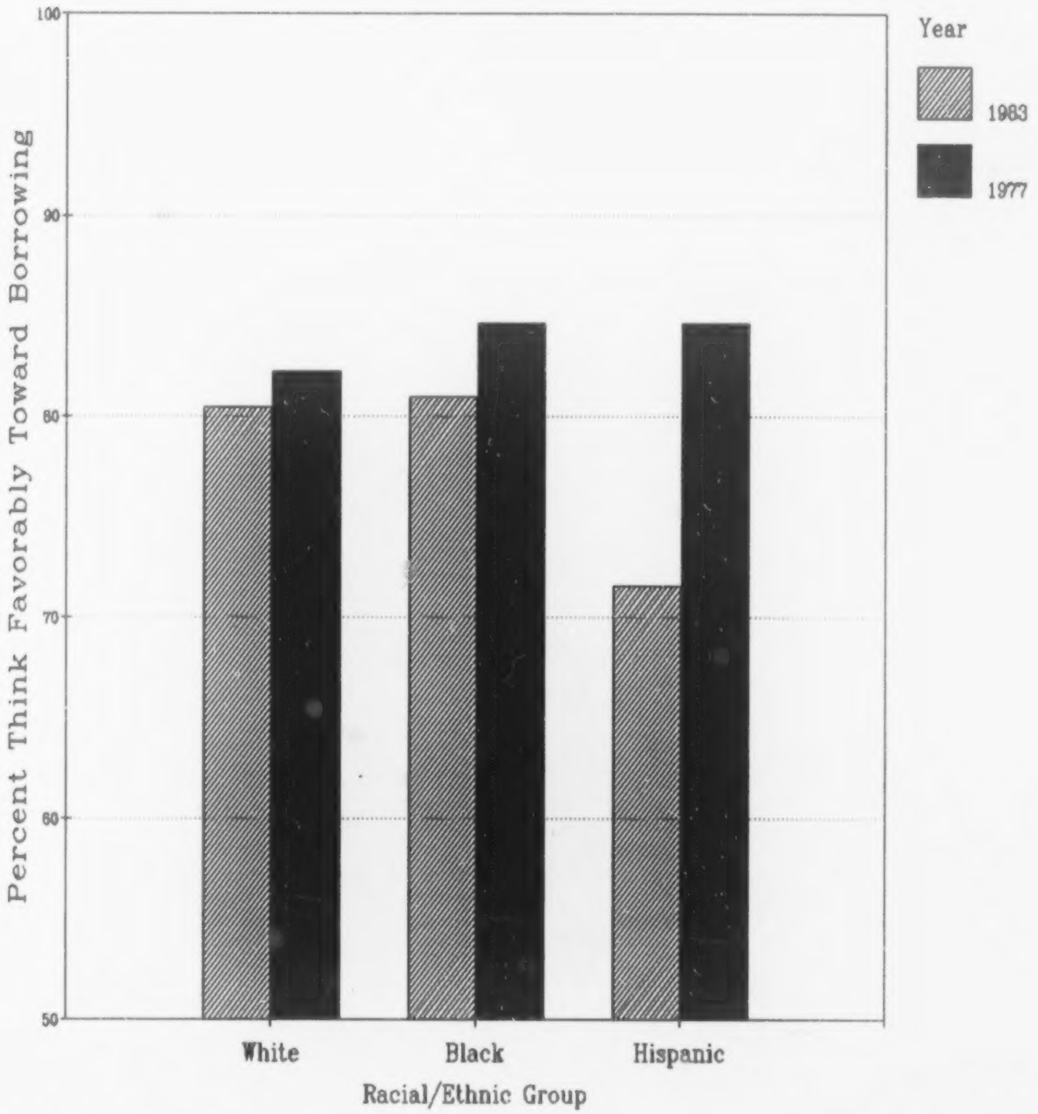
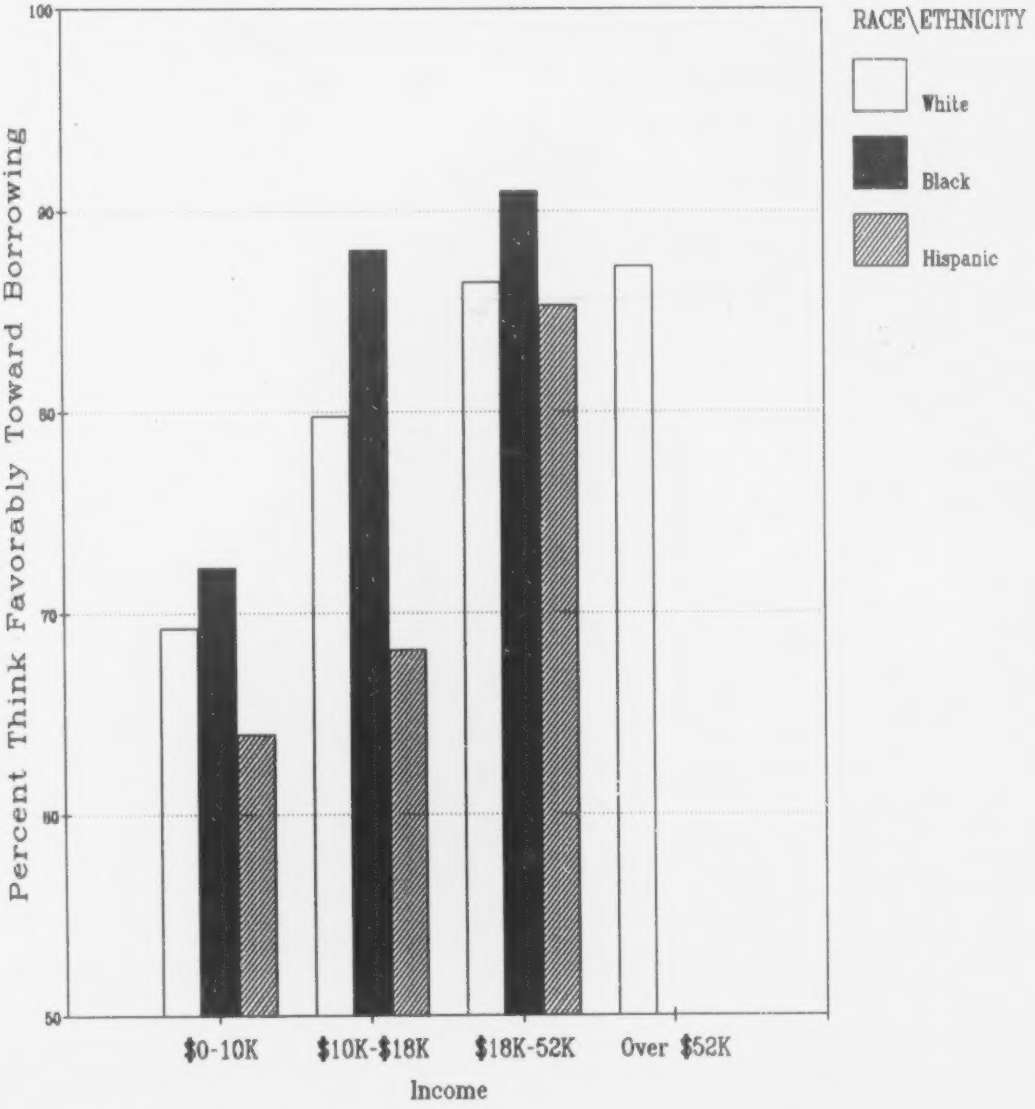


FIGURE 11
WILLINGNESS TO BORROW FOR EDUCATIONAL EXPENSES BY RACE 1983 AND 1977



Source: Survey of Consumer Finances, Federal Reserve System

FIGURE 12
WILLINGNESS TO BORROW FOR EDUCATIONAL EXPENSES BY INCOME AND RACE/ETHNICITY
1983



Source: 1983 Survey of Consumer Finances, Federal Reserve System

those from middle and upper income backgrounds, people in their 20s and 30s, workers from white collar occupations (professionals, managers), and families with incomes over $21,000 per year (1987 dollars).

However, other subgroups of the population do not share the enthusiasm for educational loans reported for the above groups. These groups have also been less evident constituencies of higher education. They include people who are older, those with least formal education, families with less income especially those from below the poverty line, Hispanics, and workers from lowest skill levels. The differences are summarized in Table 3.

TABLE 3

Population Subgroups with Most and Least Favorable Attitudes Toward Educational Loans in 1983

Characteristic	Most Favorable Group	Most Favorable Rate	Least Favorable Group	Least Favorable Rate	Difference in Rates
Age	LT 25	89.2%	GT 64	59.5%	29.7%
Educ Attainment	Coll Gd	89.3	0-8 Yrs	59.6	29.7
Family Income(83$)	$22-27K	89.0	$4-6K	61.7	27.3
Race/ethnicity	Asian	89.5	Hispanic	71.6	17.9
Occupation	Prfsnl	89.0	Laborers	75.0	14.0
Gender	Males	84.2	Females	76.4	7.8

Clearly, Americans vary in their attitudes toward educational loans.

Interpretation of the Findings

The preceding findings from the Federal Reserve System surveys show generally very favorable attitudes toward borrowing to finance educational expenses. Borrowing money for this purpose is deemed among the most worthy of reasons for borrowing by four out of five Americans.

At the same time, when the population is analyzed in more detail, some portions of the population are not enthusiastic about borrowing to finance education. This reluctance of some portions of the population must be taken into consideration by those who formulate and carry out public policy regarding the use of loans to finance college educations. The following considerations will help clarify reasons why such sensitivity is required.

Loans as Substitutes for Grant Aid

College attendance costs have increased faster than grant aid available to lowest income aid applicants, requiring such students to seek out alternative aid sources to finance the shortfall. Between 1975-76 and 1987-88, the cost of attending a public two-year college increased by about $3,900. For a campus resident at a public university, the cost increase was also about $3,900. For a campus resident at a private four-year college, the cost increase was about $6,600.

Yet during this same period of time, the maximum Pell Grant for which poverty level Pell applicants could qualify increased by just $700 -- from $1,400 to $2,100. That leaves a shortfall of $3,200 at public community colleges and universities, and $5,900 at private four-year colleges, to be made up by alternative financial aid sources (including choosing a lower cost institution or not attending college at all). For 1988-89, public college attendance costs will increase by another $300 to $400, and private college costs will increase by another $700 to $800, while the maximum Pell Grant for the neediest aid applicants will increase by just $100.

Pell Grant recipients are typically lowest income aid applicants and therefore most dependent on financial aid to pay for their college attendance costs. Most alternative aid sources have not increased to make up for the lack of growth in the Pell Grant Program. (Some of these programs have actually been reduced or eliminated altogether.) As a result, the composition of financial aid packages available to needy students has shifted away from grant aid toward loan aid. According to a national survey of college freshmen, 7 percent of all first-time, full-time college freshmen reported receiving a loan in the fall of 1976, compared to 22 percent by the fall of 1987. The proportion reporting receiving Pell Grants declined during this same period, from 21 percent to 17 percent. (Astin et al., 1987)

As the federal government has shifted its financial aid to college students from grants to loans, a number of enrollment problems have emerged that financial aid was designed to address. Notable among these problems is the college access gap for minority high school graduates compared to white high school graduates.

During the 1960s, the difference between the rates at which recent white and nonwhite high school graduates entered college shortly after high school averaged 13 percent. That is, while white high school graduates entered college at an average rate of 51 percent during the 1960s, nonwhite high school graduates entered college at an average rate of 38 percent, thus the difference of 13 percent in college participation rates during this period. During the first half of the 1970s, this gap nearly closed. Between 1974 and 1979, the difference between the white and nonwhite college participation rates for recent high school graduates averaged less than 1 percent. Then, concurrently with the decline in Pell Grants and the growth of student loans, the difference between the college participation rates began to widen. Between 1983 and 1986, the difference between the rates for whites and nonwhites averaged nearly 14 percent -- or more than it was during the 1960s.

The causes of the college access gap for nonwhite high school graduates may never be fully known. However, the reemergence of the college access gap for nonwhites is all the more striking given their improved high school retention performance (Stern, 1987), and their improved test scores at ages 9, 13 and 17 in the National Assessment of Education Progress (Grant and Snyder, 1986). In the ACT Assessment, all minority groups have shown increases in mean composite scores, particularly since 1985. Despite serious shortcomings in the preparation of many minorities for participation in higher education, blame for their declining participation in higher education should not be attributed to failures in the secondary school system. Nor, it appears from other data, can their absence be attributed to admissions denials by colleges, since colleges are admitting an increasing share of their applicants. Nor, perhaps, can the replacement of grants by loans be used to explain the loss of blacks in higher education, because of the relatively positive attitude of blacks toward loans compared to whites at similar income levels.

Rather, to the extent financial aid is a factor in the absence of minorities in higher education, the Hispanic attitude toward borrowing to finance educational expenses (or anything else for that matter) could contribute to low Hispanic participation rates in collegiate education. For blacks, who are disproportionately represented in the lowest income population, a positive attitude toward borrowing for education (compared to whites) may be overwhelmed by the reluctance of those who are poor to borrow for education. Thus, financial aid in amount and form may be an important contributing factor in the loss of minority participation in higher education during the 1980s.

Student Loan Defaults

As the volume of student borrowing to finance educational expenses has increased, so too has the volume of student loans that have been defaulted. Under a constraint of limited federal funding for student aid, more funds spent on loan defaults results in less funds available for funding potential student attendance costs. For federal fiscal year 1987, federal guaranteed student loan terminations for default cost the government -- and the student financial aid system -- $1.855 billion according to the Office of Management and Budget. Moreover, during years of large deficits in the federal budget, the growth in defaulted federally guaranteed student loans has diverted attention away from the real decline in student aid funding. Although one cannot say that this adverse publicity has reduced student aid funding, the attention focused on the contribution of student loan defaults to the federal deficit probably does not help the cause of students with financial needs to achieve higher educational opportunity.

Characteristics of Student Loan Defaulters

This section summarizes research findings on the characteristics of student loan defaulters. As will be shown, the characteristics of students likely to default on their student loans are similar in some respects to the characteristics of individuals who are likely to hold an unfavorable view of educational loans.

The major research findings on the characteristics of GSL defaulters may be summarized under the following nineteen points. States, agencies or researchers reporting these findings are noted.

Precollegiate Characteristics

1. Defaulters tend to come from very low family income backgrounds. (VA, PA, US, Wilms, GAO)
2. Black students have the highest probability of defaulting, followed by Hispanics and whites. Asians have the least probability of defaulting. (Wilms)
3. Males are somewhat more likely to default than females. (Wilms)
4. Defaulters are more likely to be high school dropouts. (Wilms)
5. Noncitizen borrowers are less likely to default than borrowers who are citizens. (Wilms)
6. Independent students are more likely to default than dependents. (GAO) However, another study of California defaulters reached the opposite conclusion. (Wilms)

Collegiate Characteristics

7. Defaulters attend short duration programs. (GAO)
8. Defaulters tend to attend vocational or proprietary schools. (NY, PA, GAO, Wilms)
9. Defaulters are more likely to have enrolled in a program of study in cosmetology than in business, trade, health or other programs. (Wilms)
10. Defaulters average about one year in postsecondary education. (PA,NY)
11. Program dropouts are more likely to default on loans than are those who completed their programs of study. (Wilms)
12. Default rates drop off with increasing enrollment persistence. (GAO)
13. Defaulters are more likely to attend school in a state different than the state of the guarantor. (GAO)
14. Defaulters are more likely to reside in a state different from that of the guarantor and the school attended. (GAO)

Postcollegiate Characteristics

15. Defaulters are far more likely to be unemployed when their loans become due than are borrowers who have jobs after graduation. (NY)
16. The earnings of defaulters were relatively low when the loan became due. (PA)
17. Defaulters usually have smaller loan balances than those who pay. (PA, VA, CA, VT, NY, IL, GAO)
18. Defaulters are likely to have only one loan. (NY, CA)
19. Defaulters report little family help in repaying their loans. (NY)

Most of these findings were known to and summarized by the Belmont Task Force, convened in January of 1988 by Congressman Williams to consider options for dealing with the issue of student loan defaults. The Belmont group reached this conclusion: "Contrary to popular perception, the typical defaulter is not a 'deadbeat' who refuses to pay, but appears to be a dropout who is unable to pay." (Belmont, 1988) The Belmont Task Force concluded that a substantial portion of the student loan default problem could be ascribed to "structural default" -- that is, to loan recipients who by virtue of being high risk would normally encounter difficulty in repaying their student loans.

The most consistent finding in studies of precollegiate characteristics of student loan defaulters is that they come disproportionately from very low income family backgrounds. At the same time, family income more effectively discriminates among different subgroups surveyed in attitudes toward borrowing to finance educational expenses: very low income respondents were much less likely to endorse borrowing to finance educational expenses than were respondents from middle income families.

Another parallel finding relates to race/ethnicity. In the California study by Wilms and his colleagues (1987), blacks, on average, were found to have the highest probability of default, followed by Hispanics and whites, with Asians least likely to default. In the Federal Reserve System attitudinal data for 1983, Hispanics had the least favorable attitude toward educational loans, followed by whites and blacks. The difference for blacks between borrowing attitude and repayment behavior may be related to the labor market conditions for black college graduates, particularly black male college graduates compared to white male college graduates.

Other findings are inconsistent between characteristics of those with less positive attitudes toward borrowing to finance educational expenses and those who default on student loan repayment obligations. This does not negate the value of the attitudinal data because the attitudinal survey measured only willingness to take out an educational loan, not willingness or ability to repay it following college. Rather, the attitudinal data are better used to evaluate front-end enrollment decisions regarding the effect of the student aid package containing loans on student enrollment decisions of access, choice, and persistence. Other conditions will determine student loan repayment after college.

Conclusion

Guaranteed student loan program costs have drawn the attention of the federal government policy makers and program administrators as a problem of their costs rather than as a matter of their causes. Generally, financial aid research has reflected the federal concern with student loan defaults in the manner of a budget issue, rather than as an issue related to an assessment of the effectiveness and appropriateness of loans as a means of financing educational opportunity aims of student financial aid. Most prior research has sought to identify the characteristics of defaulters, the kinds of schools they attended, and the practices of schools and lenders in making loans available to students. The policy, administrative, and research objective was and is the control of program costs. To date, this effort appears to have been largely unsuccessful in achieving its objective of reducing the default costs of student loans.

Missing from this appraisal of the loan aspects of student aid policy is a consideration of whether or not guaranteed student loans are achieving the purposes for which they were created -- to help students with financial need to pay for their college educations. During the same period of time when loans replaced grants as the major form of federal student financial aid, the proportion of white recent high school graduates going on to college increased sharply while the proportion of nonwhites going on to college decreased sharply. Is there a connection between the growth in loans, the growth in white college enrollment, and the decrease in nonwhite college enrollment?

The assessment of attitudes toward borrowing to finance educational costs is important. The study of attitude can help identify the limitations of loans in achieving higher educational opportunity goals of access, choice, and persistence. Some populations appear to be more receptive to loans than other populations. For students with serious reservations about educational loans, alternative means of financing higher educational opportunity aims must be developed if equity of higher educational opportunity is to be restored.

The attitude research summarized by Carlson from the early 1970s and the findings reported here from the Federal Reserve System surveys conducted between 1959 and 1983 consistently indicate that not all financial aid applicants share the same attitudes toward borrowing to finance educational costs. For example, those with lowest incomes have the most negative attitudes toward borrowing, and have the highest default rates. Asians, with a favorable attitude toward borrowing, also have a low default rate.

But the research is not complete. For example, the finding by Wilms and his colleagues that blacks have the highest probability of defaulting on their student loans was not controlled by any measure of academic aptitude. Extensive research on success in college has shown strong relationships between previous academic performance (e.g., high school class rank), standardized tests (e.g., ACT, SAT), and success in college. Since many blacks enter college less well prepared to succeed than better prepared peers, the lack of control for known measures of probability of success in college should temper the significance of this finding. Nor, for that matter, were any postcollegiate job market conditions controlled for in his study, despite the consistent finding from other studies that defaulters are most likely to be unemployed when they enter default.

Directions for Future Research

Additional information is needed to address through effective public policy two key questions. First, are loans effective substitutes for grants for all groups of potential students? Second, what can be done to reduce student loan defaults? These two questions are undoubtedly related, and insight gained from the study of either questions would probably help resolve the other.

An accurate and useful model of student loan default should completely and appropriately control for three categories of influence on loan default probability. Research findings on defaulter characteristics reported to date are suggestive, but cannot be said to be conclusive without more comprehensive modeling. In fact, the following research model could provide information that would address student aid program effectiveness as well as guaranteed student loan program costs.

First, precollegiate loan recipient characteristics known to influence college enrollment behavior, success in college, and attitude toward borrowing must be specified. These should include family socioeconomic background, high school grades, standardized test scores, previous experience with debt, and expectations.

Second, postsecondary environmental factors known to influence persistence must be included. These should include for examples measures of academic and social integration in college, and financial aid packaging and counseling.

And third, postgraduation factors must be specified. These would include job market success (including employment status when the loan comes due), earnings, and other obligations against those earnings.

Quite likely, such a research effort would produce findings that simultaneously would serve federal objectives of improved equity of higher educational opportunity and reduce the costs of the Guaranteed Student Loan program.

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TABLE A-1: AID AWARDED TO POSTSECONDARY STUDENTS
1963-64 TO 1987-88
(Current Dollars)

	Academic Year												
	63-64	70-71	75-76	77-78	79-80	80-81	81-82	82-83	83-84	84-85	85-86	86-87	87-88
FEDERAL PROGRAMS:													
Pell Grants	$0	$0	$936	$1,588	$2,505	$2,387	$2,299	$2,418	$2,792	$3,035	$3,572	$3,449	$3,739
SEOG	$0	$134	$201	$243	$333	$368	$362	$343	$361	$374	$410	$379	$396
SSIG	$0	$0	$20	$60	$76	$77	$77	$74	$60	$76	$76	$73	$76
CWS	$0	$227	$295	$469	$595	$660	$624	$615	$683	$645	$656	$636	$661
Perkins/NDSL	$114	$240	$460	$615	$646	$694	$580	$597	$682	$577	$703	$799	$830
Income Contingent Lo	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5
GSL,PLUS	$0	$1,015	$1,267	$1,737	$3,926	$6,203	$7,223	$6,694	$7,578	$8,603	$8,839	$9,099	$9,386
Social Security	$0	$439	$1,093	$1,370	$1,587	$1,883	$1,996	$733	$220	$35	$0	$0	$0
Veterans	$67	$1,121	$4,180	$2,598	$1,784	$1,714	$1,351	$1,356	$1,148	$1,002	$849	$780	$773
Other grants	$9	$16	$64	$83	$115	$118	$102	$81	$57	$54	$58	$59	$61
Other loans	$0	$42	$45	$42	$42	$62	$109	$216	$263	$327	$372	$315	$234
Subtotal	$190	$3,294	$8,561	$8,805	$11,609	$14,166	$14,723	$13,127	$13,844	$14,833	$15,535	$15,589	$16,161
Federal aid by type													
Gift Aid	$76	$1,770	$6,494	$5,942	$6,400	$6,547	$6,187	$5,005	$4,638	$4,576	$4,365	$4,740	$5,045
	40.0%	53.7%	75.9%	67.5%	55.1%	46.2%	42.0%	38.1%	33.5%	30.9%	32.0%	30.4%	31.2%
Loans	$114	$1,237	$1,772	$2,394	$4,614	$6,959	$7,912	$7,507	$8,523	$9,612	$9,914	$10,213	$10,455
	60.0%	39.4%	20.7%	27.2%	39.7%	49.1%	53.7%	57.2%	61.6%	64.8%	63.8%	65.5%	64.7%
Employment	$0	$227	$295	$469	$595	$660	$624	$615	$683	$645	$656	$636	$661
	.0%	6.3%	3.4%	5.3%	5.1%	4.7%	4.2%	4.7%	4.9%	4.3%	4.2%	4.1%	4.1%
STATE GRANT PROGRAMS	$56	$236	$490	$677	$788	$801	$921	$1,006	$1,106	$1,222	$1,311	$1,432	$1,540
INSTITUTIONAL AID	$300	$965	$1,435	$1,596	$1,888	$2,060	$2,247	$2,507	$2,881	$3,221	$3,674	$4,056	$4,565
TOTAL AID	$546	$4,495	$10,486	$11,078	$14,285	$17,027	$17,891	$16,640	$17,831	$19,276	$20,520	$21,077	$22,266
DISTRIBUTION BY TYPE													
Gift Aid	$432	$2,971	$8,419	$8,215	$9,076	$9,408	$9,355	$8,518	$8,625	$9,019	$9,950	$10,228	$11,150
	79.1%	66.1%	80.3%	74.2%	63.5%	55.3%	52.3%	51.2%	48.4%	46.8%	48.5%	48.5%	50.1%
Loans	$114	$1,297	$1,772	$2,394	$4,614	$6,959	$7,912	$7,507	$8,523	$9,612	$9,914	$10,213	$10,455
	20.9%	28.9%	16.9%	21.6%	32.3%	40.9%	44.2%	45.1%	47.8%	49.9%	48.3%	48.5%	47.0%
Employment	$0	$227	$295	$469	$595	$660	$624	$615	$683	$645	$656	$636	$661
	.0%	5.1%	2.8%	4.2%	4.2%	3.9%	3.5%	3.7%	3.8%	3.3%	3.2%	3.0%	3.0%

Source: "Trends in Student Aid," The College Board.

TABLE A-2
FEDERAL DIRECT LOAN WRITE-OFFS

(Dollars in Millions, % of Outstanding Loans)

Direct Loans:		Federal Fiscal Year 1982	1983	1984	1985	1986	1987	1988e	1989e
Commodity Credit Corporation	$	-	-	-	-	1	1	63	78
	%	-	-	-	-	.01	-	.38	.56
FmHA Agricultural Credit Insurance	$	20	31	46	114	205	865	1220	663
	%	-	-	.18	.42	.72	3.07	4.61	2.77
Rural Housing Insurance Fund	$	-	-	-	-	16	31	30	30
	%	-	-	-	-	.06	.11	.11	.12
Economic Development Developing Fund	$	-	-	-	-	-	99	100	26
	%	-	-	-	-	-	17.62	20.04	6.22
Student Loans	$	-	172	65	6	7	121	225	328
	%	-	-	1.31	.21	.08	1.74	4.42	5.80
Other Education Loans	$	-	-	-	-	15	24	60	50
	%	-	-	-	-	.19	.48	3.29	4.00
Federal Housing Administration	$	132	632	152	55	82	65	68	69
	%	-	-	3.65	1.31	1.94	1.46	1.50	1.55
MARAD Ship Financing Fund	$	-	-	-	-	-	196	-	-
	%	-	-	-	-	-	12.69	-	-
Small Business Loans	$	241	280	327	360	393	411	377	364
	%	-	-	7.12	7.60	8.00	10.51	13.49	14.53
Small Business Disaster Loan Fund	$	67	98	102	139	161	181	144	128
	%	-	-	2.06	2.92	3.67	4.56	4.09	4.48
Other	$	147	191	213	98	66	3	22	24
	%	-	-	.11	.05	.05	.01	.02	.02
TOTAL WRITE-OFFS	$	607	1404	1213	772	946	1997	2309	1760
	%			.53	.32	.38	.82	1.02	.83

TABLE A-3
FEDERAL GUARANTEED LOAN TERMINATIONS FOR DEFAULT

(Dollars in Millions, % of Outstanding Loans)

Guaranteed Loans:		Federal Fiscal Year 1982	1983	1984	1985	1986	1987	1988e	1989e
Commodity Credit Corporation	$	-	-	-	185	317	456	642	635
	%	-	-	-	3.78	7.28	12.42	11.72	10.67
FmHA Agricultural Credit Insurance	$	-	-	-	26	61	90	126	190
	%	-	-	-	2.07	3.44	3.87	3.99	4.73
Rural Development Insurance Fund	$	-	-	-	-	82	57	50	40
	%	-	-	-	-	2.96	2.51	2.80	2.57
Economic Development Revolving Fund	$	-	-	-	103	5	148	20	15
	%	-	-	-	32.09	1.92	77.49	19.80	16.48
Guaranteed Student Loans	$	286	486	749	1018	1475	1382	1728	1855
	%	-	-	2.34	3.00	3.97	3.56	4.25	4.44
Federal Housing Administration	$	890	1484	1756	2234	2906	4433	5016	5027
	%	-	-	1.03	1.22	1.39	1.78	1.80	1.87
MARAD Ship Financing Fund	$	-	-	93	321	1243	342	250	100
	%	-	-	1.32	4.76	21.73	7.38	6.18	2.72
Biomass Energy Development	$	-	-	-	-	-	196	-	-
	%	-	-	-	-	-	24.62	-	-
VA Loan Guarantee Revolving Fund	$	709	1056	1121	1353	1541	1898	2426	2322
	%	-	-	.89	1.06	1.11	1.31	1.65	1.66
SBA Business Loans	$	845	790	613	476	457	548	540	505
	%	-	-	6.26	5.30	5.32	6.31	5.85	5.57
AMTRAK	$	-	-	880	-	-	-	-	-
	%	-	-	100.0	-	-	-	-	-
Medical Facilities	$	-	-	-	-	5	-	-	-
	%	-	-	-	-	.53	-	-	-
Health Education Assistance Loans	$	-	-	-	-	18	-	-	-
	%	-	-	-	-	1.86	-	-	-
Export Import Bank	$	25	14	461	258	-	-	-	-
	%	-	-	8.11	4.77	-	-	-	-
Foreign Military Saves	$	217	440	613	-	-	-	-	-
	%	-	-	3.54	-	-	-	-	-
Other	$	98	409	344	103	25	26	74	187
	%	-	-	.11	.39	.11	.11	.27	.30
TOTAL TERMINATIONS	$	3070	4679	6630	6077	8135	9576	10872	10876
	%			.98	1.52	1.88	2.00	2.10	2.03

Source: Executive Office of the President, Office of Management and Budget. Special Analyses, Budget of the United States Government, Fiscal Year 19XX.
e: Estimated

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Thomas G. Mortenson

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FAMILY INCOME, CHILDREN, AND STUDENT FINANCIAL AID

Thomas G. Mortenson

EXECUTIVE SUMMARY

Need analysis in student financial aid begins with a careful scrutiny of the ability of each aid applicant's family to finance college attendance costs from its own income and assets. Nearly all of the family contribution expected by the analysis of ability to pay is produced by family income, and the Congressional Methodology implemented for the 1988-89 academic year places even greater emphasis on income and less on assets than did the Uniform Methodology which it replaced.

However, poor families now constitute a larger share of all American families than they did when the current student financial aid system was designed in the early 1970s. The growth in the proportion of families that are poor, coupled with the increasing proportion of American children being raised in families living below the poverty level, has profound implications for American socioeconomic evolution. Student financial aid policy, funding, and administration are especially affected by the growth in the proportion of poor families.

The shifting American family income profile is already reflected in both the population of financial aid applicants and the population of American college freshmen. During the first half of the 1980s, a growing proportion of financial aid applicants were poor, and since the late 1960s an increasing proportion of American college freshmen are poor. Increasingly, however, the poorest college students are concentrated in public two-year colleges. Though never numerous, they have nearly disappeared from public and private universities during the last decade.

When the family income profile of American children is matched against college attendance costs through need analysis, more than four out of five children would require financial assistance to be able to attend college today--even the least costly college--under assumptions about ability to pay imbedded in need analysis. Fewer would be able to attend moderately priced colleges without financial aid. Less than one in ten would be able to attend an average cost private college without financial aid. While the American economy remains strong, these proportions will likely decrease somewhat in the future. When the economy deteriorates, however, as its cyclical history predicts it will, the proportion requiring financial aid will increase.

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FAMILY INCOME, CHILDREN, AND STUDENT FINANCIAL AID

Thomas G. Mortenson

Introduction

A redistribution of American families along the income spectrum has occurred since 1970: poor and affluent families are now larger proportions of all American families, and middle income families are a smaller proportion. This redistribution has profound implications for socioeconomic evolution in America generally, and more specifically for higher education.

The family income redistribution also has immediate consequences for student financial aid policy, funding, and administration. So long as families have first responsibility for financing the college attendance costs of their children from their own income and assets, shifts in the family income distribution will alter the expected family contributions that result from standardized need assessment. The amount of aid required to meet need, and to some extent the form of aid appropriate to meeting that need, will also be altered.

Until the Congressional Methodology (CM) became the standard for need assessment beginning with the 1988-89 academic year, family income, though important, played a somewhat lesser role in determining each family's expected contribution under the Uniform Methodology. The new CM has shifted the emphasis more toward current and future income, and away from assets, in determining expected family contributions. For example, special formulas specified in the Congressional Methodology for displaced homemakers and dislocated workers remove home equity from the calculation of resources available to finance college attendance costs. The shift in need assessment emphasis more heavily toward income and away from assets is shown in Table 1 for dependent ACT Family Financial Statement (FFS) aid applicants.

This paper first examines income in the United States since World War II in several ways. This examination first explores the redistribution of personal income among families, and the causes of this change. Then the discussion focuses on families with children, single mothers with children, young families with children, and the growth in child poverty rates. The second section of the paper examines data to see how these changes are reflected in the financial aid applicant population. The third section examines the distribution of financial aid applicants and college freshmen by family income across college type and control. The final section of the paper deals with college attendance costs and the financial resources of families to pay these costs, as determined through need analysis. Under the expectations of need analysis formulas and the judgments about ability to pay that they embody, the population of children requiring financial aid to attend different types of colleges is described.

TABLE 1

Average Expected Family Contribution for Dependent ACT Family Financial Statement Filers 1980-81 to 1988-89

Academic	Parental Contribution							Student Contribution				
Year	Income		Assets		Adjst*		Total	Income		Assets		Total
Uniform Methodology												
1980-81	$ 879	62%	$ 377	27%	$ 168	12%	$1419	$ 605	84%	$ 116	16%	$ 721
1981-82	775	56	428	31	181	13	1384	750	86	118	14	868
1982-83	1041	59	506	29	226	13	1773	876	87	128	13	1004
1983-84	946	57	503	30	215	13	1664	840	86	135	14	975
1984-85	1247	63	522	26	218	11	1987	776	84	152	16	928
1985-86	1810	72	496	20	203	8	2509	757	82	171	18	928
1986-87	2068	74	509	18	201	7	2778	763	80	187	20	950
1987-88	2185	77	470	17	192	7	2847	759	80	190	20	949
Congressional Methodology												
1988-89	2420	86	286	10	99	4	2805	1801	90	211	10	2012

*Addition to negative parental contributions to bring them up to zero.

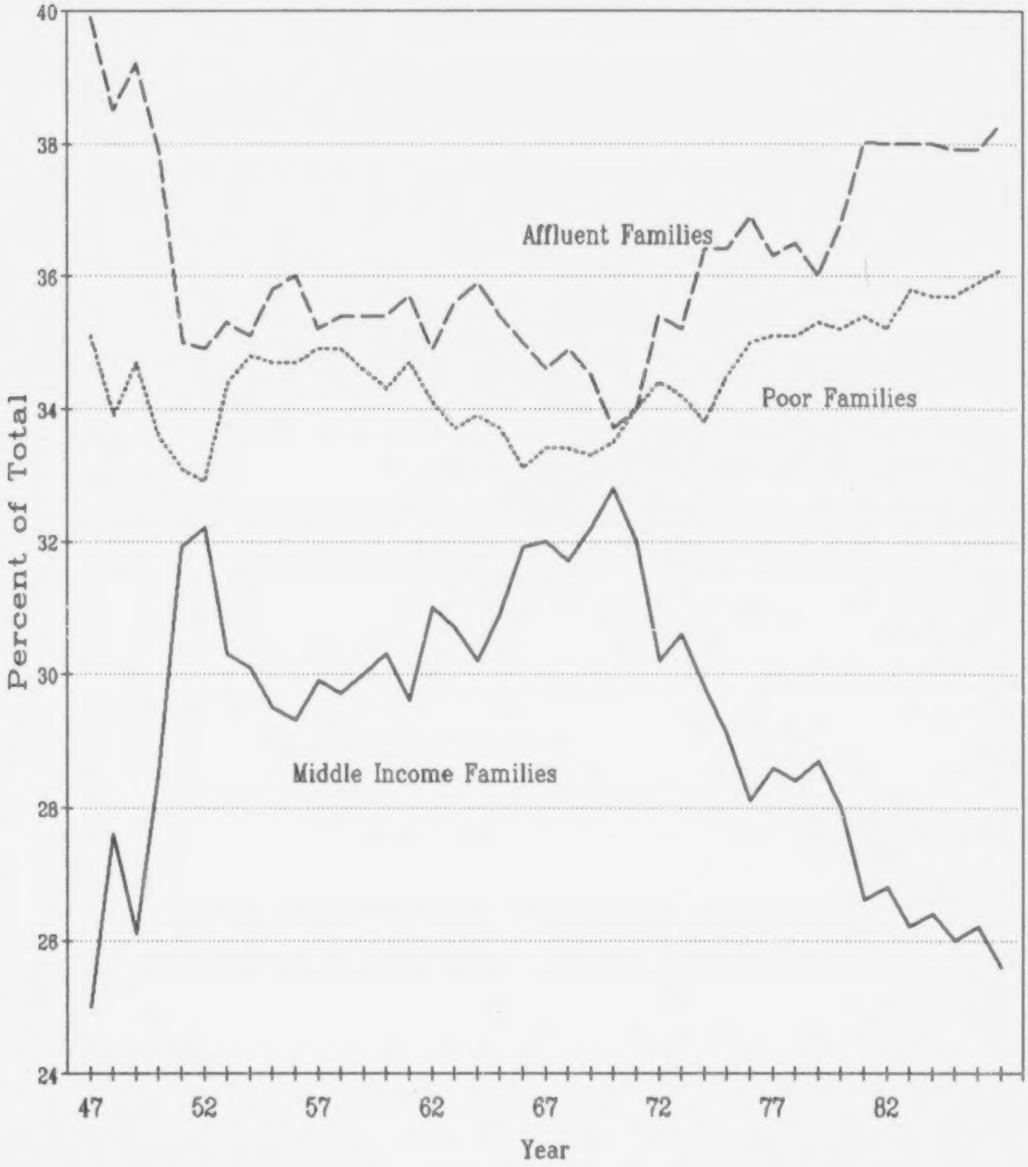
This paper uses Census Bureau definitions for families, children and income unless otherwise noted. A "family" is two or more people, related by blood or marriage, who live together. A "child" is less than 18 years of age. "Income" refers to the total of all sources of income, including earnings of all family members, and includes earned income, property income, and income transfers. "Poverty" is defined by the Social Security Administration as the money income required to maintain a minimum standard of living, and varies according to family size and age of householder. Poverty thresholds are recalculated each year based on inflation.

Family Income

Distribution of Families by Income

In 1970, American families were almost equally divided between three income groups: The first group of families had incomes above 125 percent of median family income for all American families; the second group had incomes of between 75 percent and 125 percent of median family income; and the third group had incomes below 75 percent of median family income. In this section we will refer to these three groups of families as affluent, middle income, and poor, respectively.

FIGURE 1
DISTRIBUTION OF AMERICAN FAMILIES BY INCOME
1947-1987



Source: Current Population Survey, Series P-60.

Between 1970 and 1987 the proportion of families that had middle incomes declined from 32.2 percent to 25.6 percent of all families, as shown in Figure 1. The proportion of all families that were affluent increased from 34.5 percent to 38.3 percent. The proportion of poor families increased from 33.3 percent in 1970 to 36.1 percent in 1987--the largest proportion of poor families, according to the definition used in this paper, at any time since data were first collected in 1947.

Redistributional Causes

Several studies of the redistribution of American family income have appeared during the 1980s. These studies are extensive and analytical in their descriptions of family income redistribution, and theoretical in their interpretation of its many causes. They are also troubling in their implications for social mobility, business loss of middle income consumption, and for those concerned about fairness and social harmony. Because of the breadth of this literature, this paper will only summarize some of its major findings and interpretations. While these findings are treated independently in the following summary, they are usually interrelated in ways that complicate their understanding and solution.

A consistent finding across studies of labor markets is that relatively well-paid manufacturing jobs have been shipped overseas during the last two decades (Bluestone and Harrison, 1982; Kuttner, 1983; Thurow, 1985). The concentration of capital and technology in the United States after World War II led to the rapid expansion of manufacturing capacity and jobs. The wealth thus created was redistributed among American workers through government and union actions. The relatively affluent and large middle class thus created resulted in the further benefit of expanding domestic consumption markets for manufactured products.

Beginning about 1970, however, multinational corporations shifted manufacturing jobs overseas--a shift facilitated by the portability of technology and capital. The immobile American manufacturing worker was abandoned, with shrinking equivalent substitutes but expanding job opportunities in the lower paid service sector. As Professor Bluestone (1982) pointed out:

> "The pattern of wages in the old, mill-based economy looked just like a normal bell curve. It had a few highly paid jobs at the top, a few low-wage jobs at the bottom, and plenty of jobs in the middle. But in the new services economy, the middle is missing."

A second major force was the application of technology in domestic manufacturing. With the economic goal of efficient production of goods, manufacturers who did not seek cheaper labor overseas tried to replace expensive American labor with machines and processes that produced goods at lower cost domestically. This occurred as labor unions and governments were becoming weaker in their redistributive roles. The economic fruits of improved efficiency were not shared by labor, although owners and consumers derived short-term profits from this change (Kuttner, 1982).

Demographics provided another set of influences. The post World War II baby boomers arrived on the labor market just when the participation of women in the labor force was rapidly increasing. This massive influx of labor shifted the balance away from demand and toward supply--and when supply exceeds demand, prices fall. The labor market value of labor was thus depressed, unevenly as it turns out, but in ways that the the labor market is still adjusting to today. For families the gains in earnings resulting from working wives were substantially offset by losses in real earnings of husbands (Rose & Fasenfest, 1988).

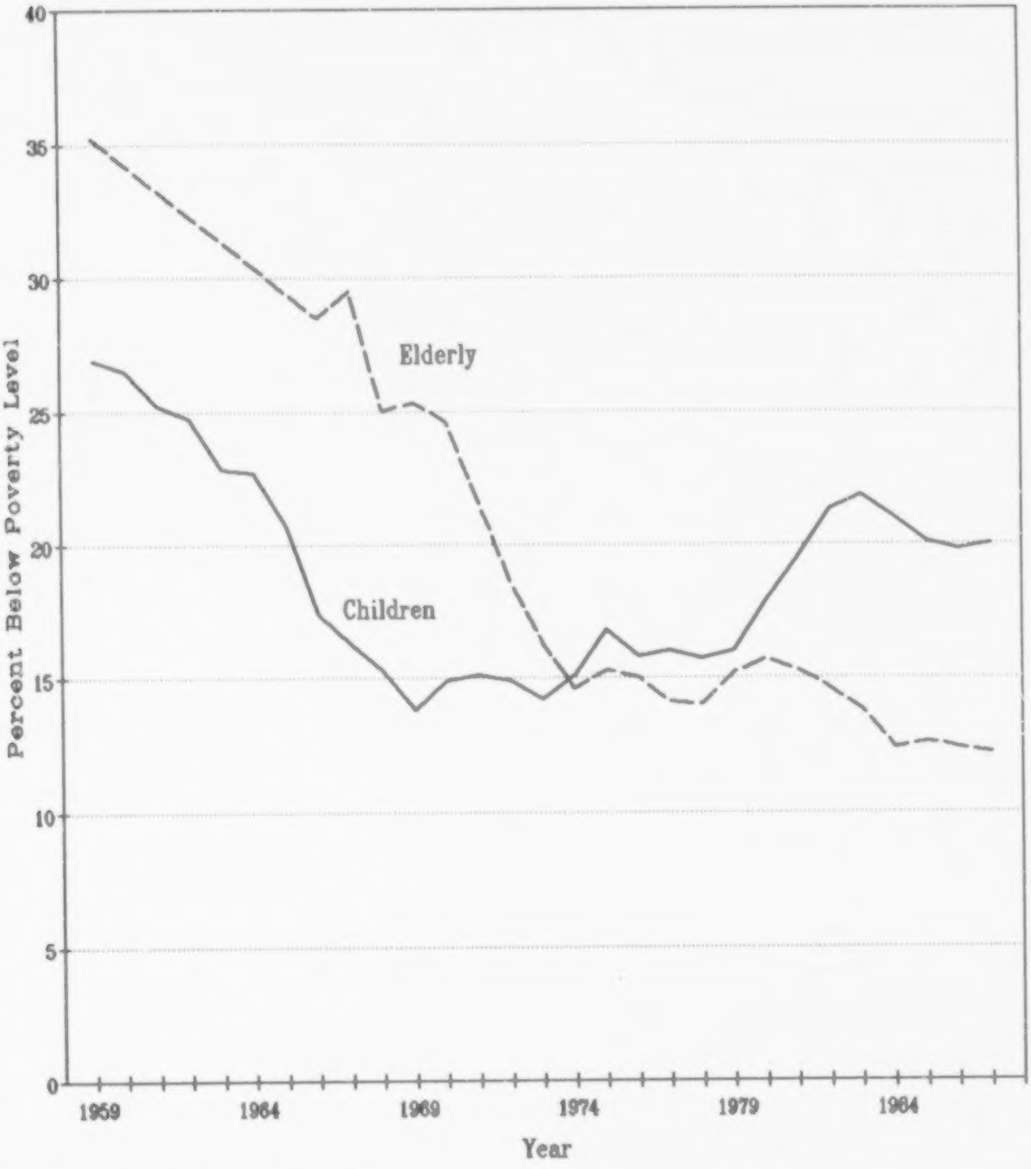
Another demographic dimension of family income redistribution, beyond baby boomers and female labor force participation rates, is the growth in female-headed families as a result of divorce and teenage unwed motherhood. Among families with children, married couple families still constitute 70 percent of the total. However, between 1970 and 1986, the number of married couple families with children has remained constant, year after year, at between 24 and 25 million, while the number of female headed families with children has increased from 3 million to nearly 7 million. As a result, by 1986 the proportion of female headed families had increased to 20 percent from 11 percent of the total in 1970. Since 1970 the only growth in numbers of families with children has occurred among families headed by single mothers (Congressional Budget Office, 1988).

This growth in female headed families has occurred at the low end of the family income distribution. Policies and programs that addressed the poverty of the elderly--and hence moved elderly families up the income scale--reduced the poverty rate of the elderly. In 1970 the poverty rate for the elderly was 24.6 percent. By 1986 it had dropped to 12.4 percent. As the elderly moved up the family income ladder, they were replaced at low income levels by young families and families headed by females with children. (See Figure 2.)

One family characteristic appears to apply broadly and distinguish among families moving up or down the income ladder, particularly during the 1980s: the educational attainment of the head. There exists a strong relationship between income and education that extends to families as well as individuals. Figure 3 shows median family income by householder--usually the head of the family--for 1987. These medians range from about $14,700 for families where the householder has less than 8 years of elementary education, to about $54,500 for families where the householder has 5 or more years of college.

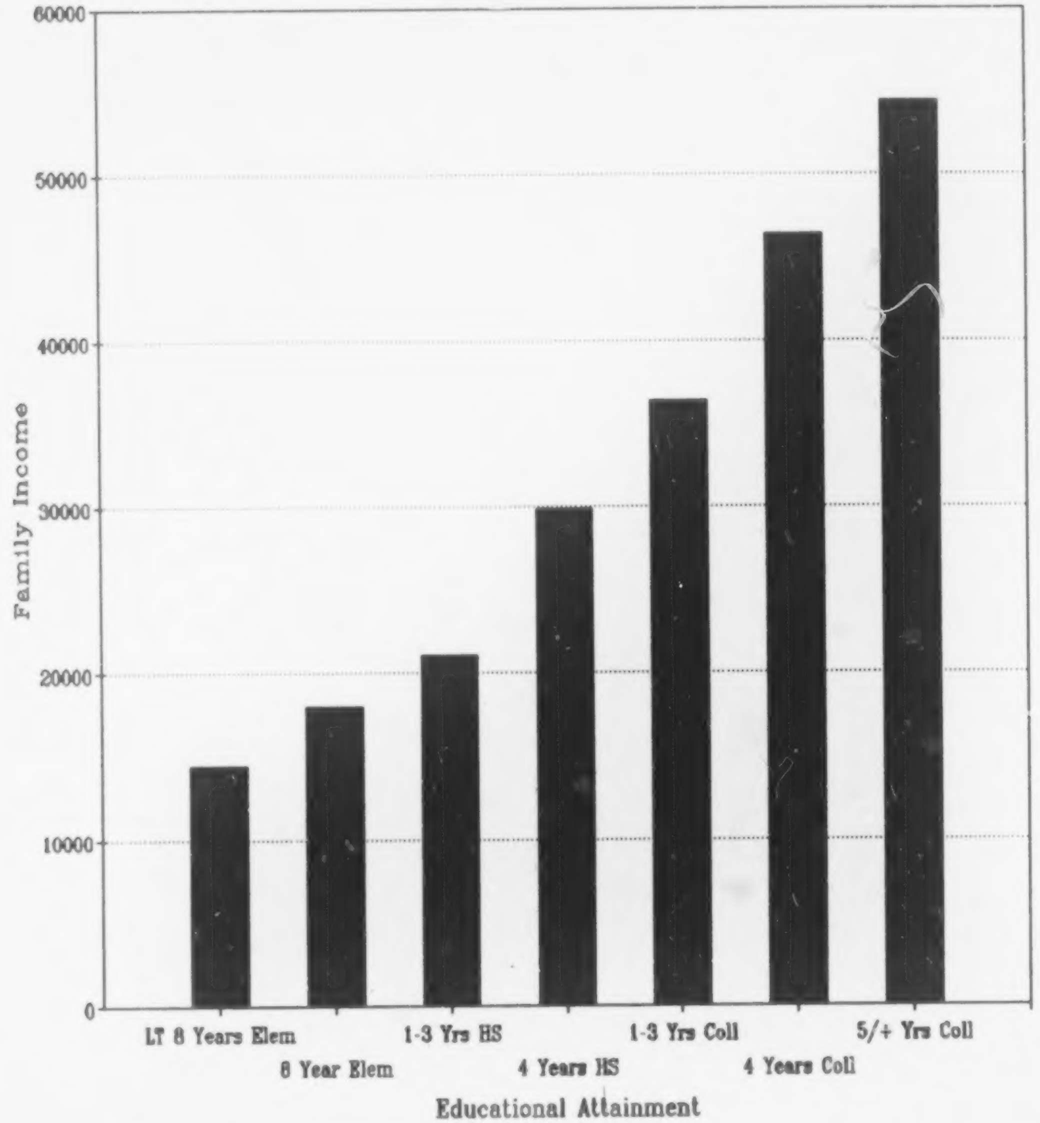
The relationship between income and education was fairly constant until 1980. Then, between 1980 and 1987, median family income adjusted for the effects of inflation increased for families headed by persons with at least some college, and declined mainly for families headed by individuals with lesser levels of educational attainment. These data are shown in Figure 4. The largest gains in real income--16 percent--were among families headed by individuals with five or more years of college education. The largest decline in real income--minus 5 percent--was in families headed by individuals with eighth grade educations.

FIGURE 2
POVERTY RATES FOR CHILDREN AND ELDERLY PERSONS
1959-1987



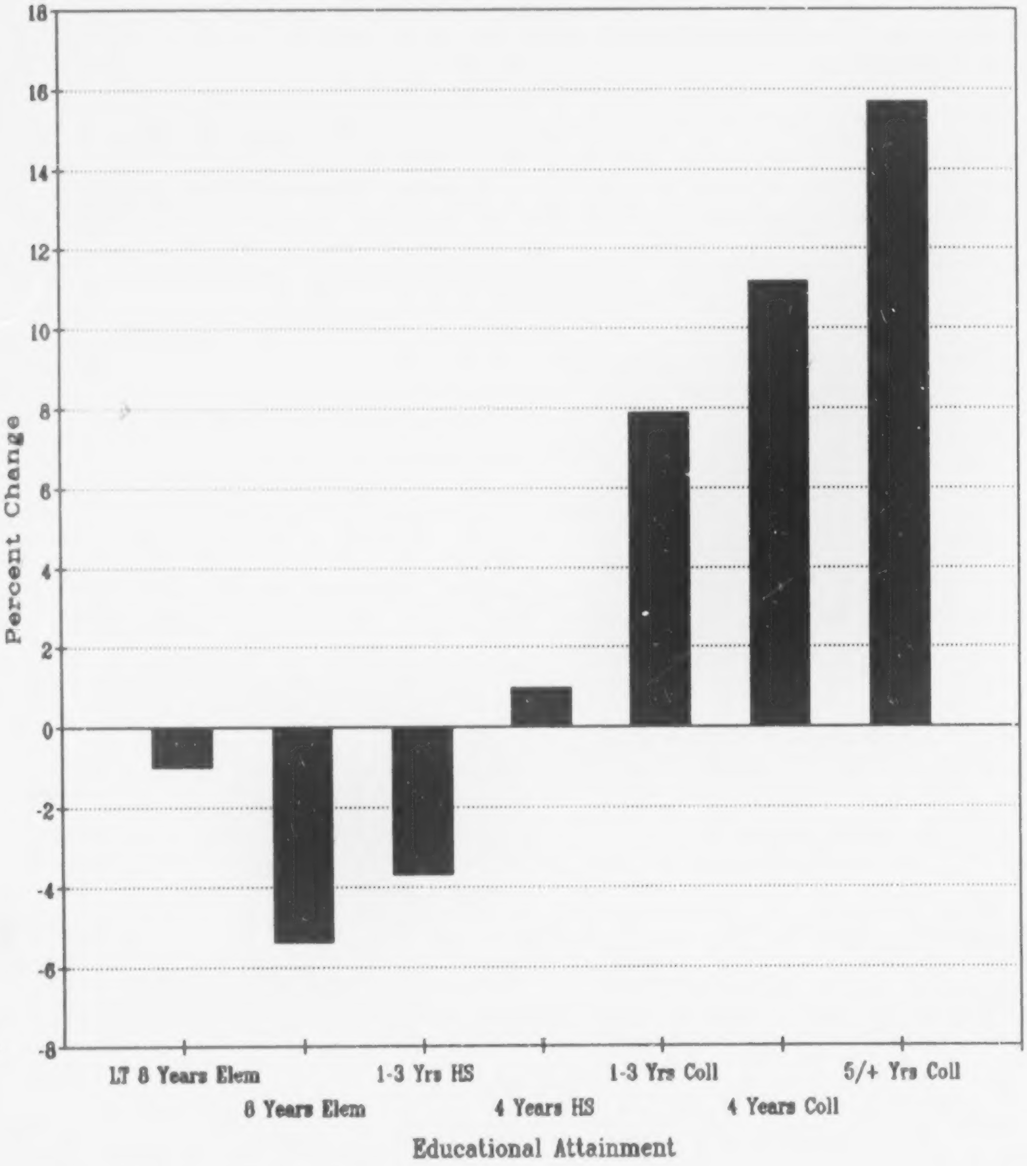
Source: Current Population Reports, Series P-60.

FIGURE 3
MEDIAN FAMILY INCOME BY EDUCATIONAL ATTAINMENT OF HOUSEHOLDER, ALL FAMILIES, ALL RACES
1987



Source: Current Population Reports, Consumer Income, Series P-60.

FIGURE 4
CHANGE IN MEDIAN FAMILY INCOME BY EDUCATIONAL ATTAINMENT
BETWEEN 1980 AND 1987



Source: Census Bureau, Current Population Reports, Series P-60.

The numbers are even more striking when young families are examined. The Children's Defense Fund report shows that median family income for young families headed by college graduates increased between 1973 and 1986. However, median incomes fell by 17 percent for young families headed by high school graduates, and by 35 percent in young families headed by high school drop-outs. The poverty rate among this latter group of families increased from 29 percent in 1973 to 46 percent by 1986 (Johnson, Sums, & Weill, 1988).

Distribution of Children by Family Income

Using the Congressional Budget Office definition of "family," which includes elderly persons and households of unrelated individuals, in 1986 just 35 percent of all families had children living in them. However, excluding households of the elderly and unrelated individuals, the proportion of nonelderly families with children was 62 percent in 1986--down from 67 percent in 1970 due to the growth in the number of families without children. Currently about 34 million American families include children. The remainder of this paper is limited to discussions of families with children.

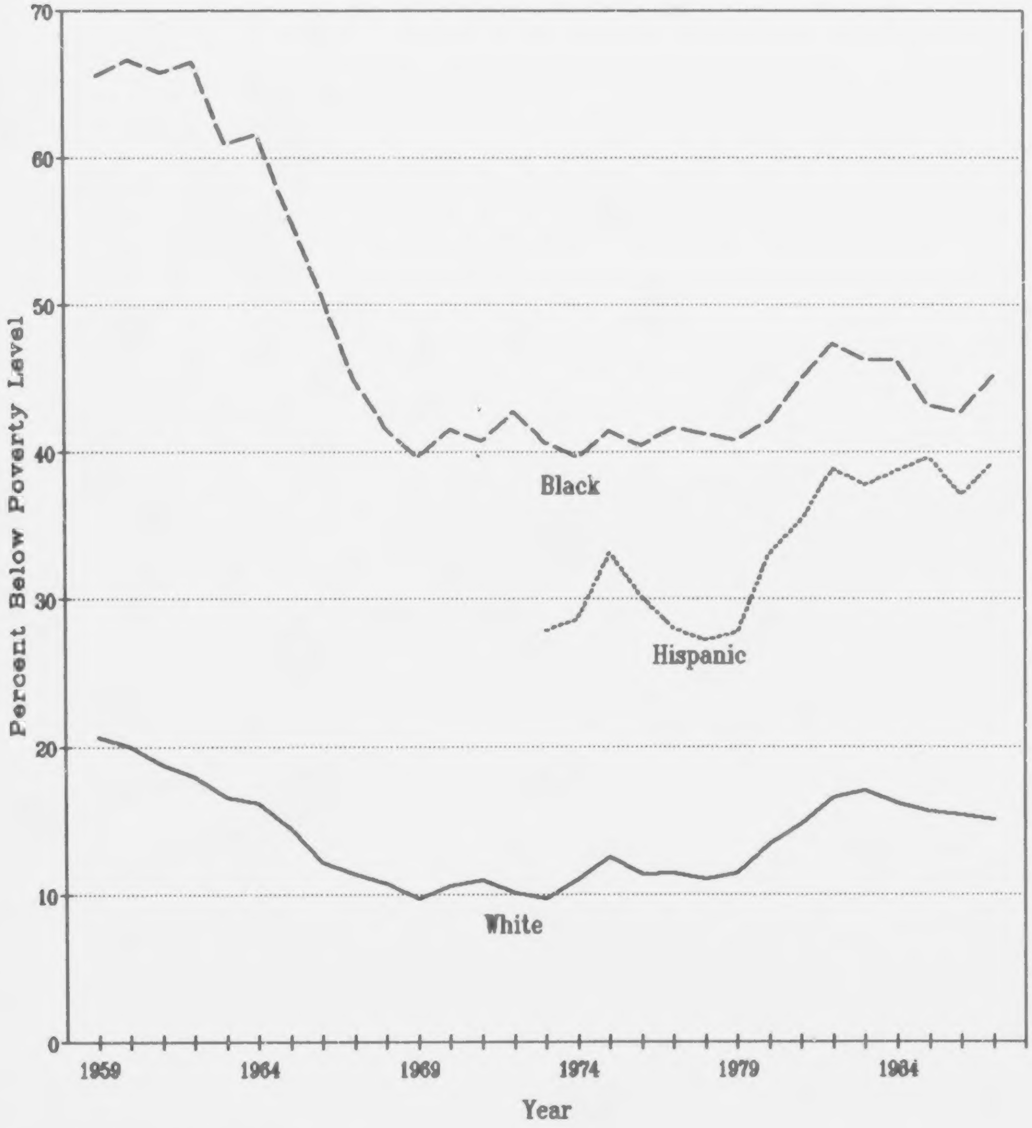
Poverty. In 1986 there were about 62 million children in the United States; of these, 12.3 million were living in poverty. (By comparison there were about 12.5 million undergraduate and graduate students enrolled in American higher educational institutions.) About one in five American children lived in poverty in 1986. These rates are somewhat higher in the South than in the rest of the country, and considerably higher for blacks (42.7 percent) and Hispanics (37.1 percent) than for whites (15.3 percent). By race, the largest number of children living in poverty is for whites at 7.7 million.

During the 1960s, the United States made significant progress in reducing the proportion of its children who lived in families below the poverty level--from 26.9 percent in 1959 to 13.8 percent by 1969. These years coincide with the period when domestic social programs proposed by Presidents Kennedy and Johnson constituted the federal War on Poverty. During this ten-year period, the child poverty rates for whites declined from 20.6 to 9.7 percent, and for blacks from 65.5 to 39.6 percent. These rates are shown in Figure 5.

Since 1979, the proportion and numbers of American children living in families with incomes below the poverty level has increased. Between 1979 and 1987, the child poverty rate increased from 16.0 to 20.0 percent, and the number of children living in poverty increased from less than 10 million to about 12.5 million. For white children the poverty rate increased from 11.4 to 15.0 percent, for black children from 40.8 to 45.1 percent, and for Hispanic children from 27.7 to 39.3 percent. In the cases of whites and Blacks, the 1987 data were below the peaks reached about 1982 during a period of economic recession.

The Children's Defense Fund study of young families reveals a more bleak picture. Between 1973 and 1986 the child poverty rates among children in young families increased from 21 percent to 35 percent. Young families with children were seven times more likely to be in poverty in 1986 than were young families without children (Johnson, Sums, & Weill, 1988).

FIGURE 5
CHILD POVERTY RATES BY RACE\ETHNICITY FOR CHILDREN UNDER 18 LIVING IN FAMILIES
1959-1987



Source: Current Population Reports, Series P-60.

<u>Children by Family Income Levels</u>. Most children above the poverty level live in families that will require financial aid to be able to attend college, a theme developed more completely in a later section of this paper. Here, however, we want to examine briefly the distribution of children across families of different income levels.

Figure 6 shows the distribution of America's 62 million children by level of family income and parental structure of the family. About 47 million children live in married couple families. Another 13 million live in female headed families without a husband present. About 2 million children live in other families, such as families headed by a male with no wife present.

FIGURE 6

Distribution of Children by Family Income and Parents' Status
1986

```
       Total Family
       Money Income
           /|\
            |+
$75,000 ____|
            |MMM
            |MMMM
            |MMMMM
            |MMMMMM
            |MMMMMM
$60,000 ____|MMMMMMMM
            |MMMMMMMMMM
            |MMMMMMMMMMM
            |MMMMMMMMMMM
$50,000 ____|O F MMMMMMMMMMM
            |MMMMMMMMMMMMMMM
            |O F MMMMMMMMMMMMMMM
            |MMMMMMMMMMMMMMMMMMM
$40,000 ____|O F MMMMMMMMMMMMMMMMMMM
            |O F MMMMMMMMMMMMMMMMMMMM
            |O FF MMMMMMMMMMMMMMMMMMMMMMMMM
            |O FF MMMMMMMMMMMMMMMMMMMMM
$30,000 ____|O FF MMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
            |O FFF MMMMMMMMMMMMMMMMMMMMMMM
            |O FFF MMMMMMMMMMMMMMMMMMMMMMMMMMM
            |O FFFF MMMMMMMMMMMMMMMMMMMMMMMM
$20,000 ____|O FFFFFF MMMMMMMMMMMMMMMMMMMMMMM
            |O FFFFF MMMMMMMMMMMMMMMMMMM
            |O FFFFFFFF MMMMMMMMMMMMMMMMMMMMM
            |O FFFFFFFFF MMMMMMMMMMMMMMMM
$10,000 ____|O FFFFFFFFFFF MMMMMMMMMMMMMMMMMM
            |O FFFFFFFFFFFFF MMMMMMMMMMMMM
            |O FFFFFFFFFFFFFFFFFFFFFF MMMMMMMM
            |O FFFFFFFFFFFFFFFFFFFFFF MMMMM
            |O FFFFFFFFFF MMMM
------------0----------------------------------------
             Number of Children
```

O, F, M = 100,000 children
M = married couple families
F = female householder, no husband present
O = other, including male householder, no wife present

The female headed households are concentrated toward the lower end of the income distribution and had a median family income of $9,467 in 1986. The proportion of all children being raised in this kind of family situation has increased steadily, from 16.9 percent in 1976, to 18.6 percent in 1980, to 20.6 percent by 1986. This trend shows no signs of abating.

Married couple families, in contrast, had median family incomes of $33,023. While 76.6 percent of all children were being raised in this family type in 1986, a decade earlier in 1976 81.5 percent of all children were in married couple families. This trend too shows no signs of abating.

Impact of the Family Income Shift on Aid Applicants

Evidence from several sources suggests that the redistribution of families by income has affected the characteristics of college students generally and financial aid applicants in particular.

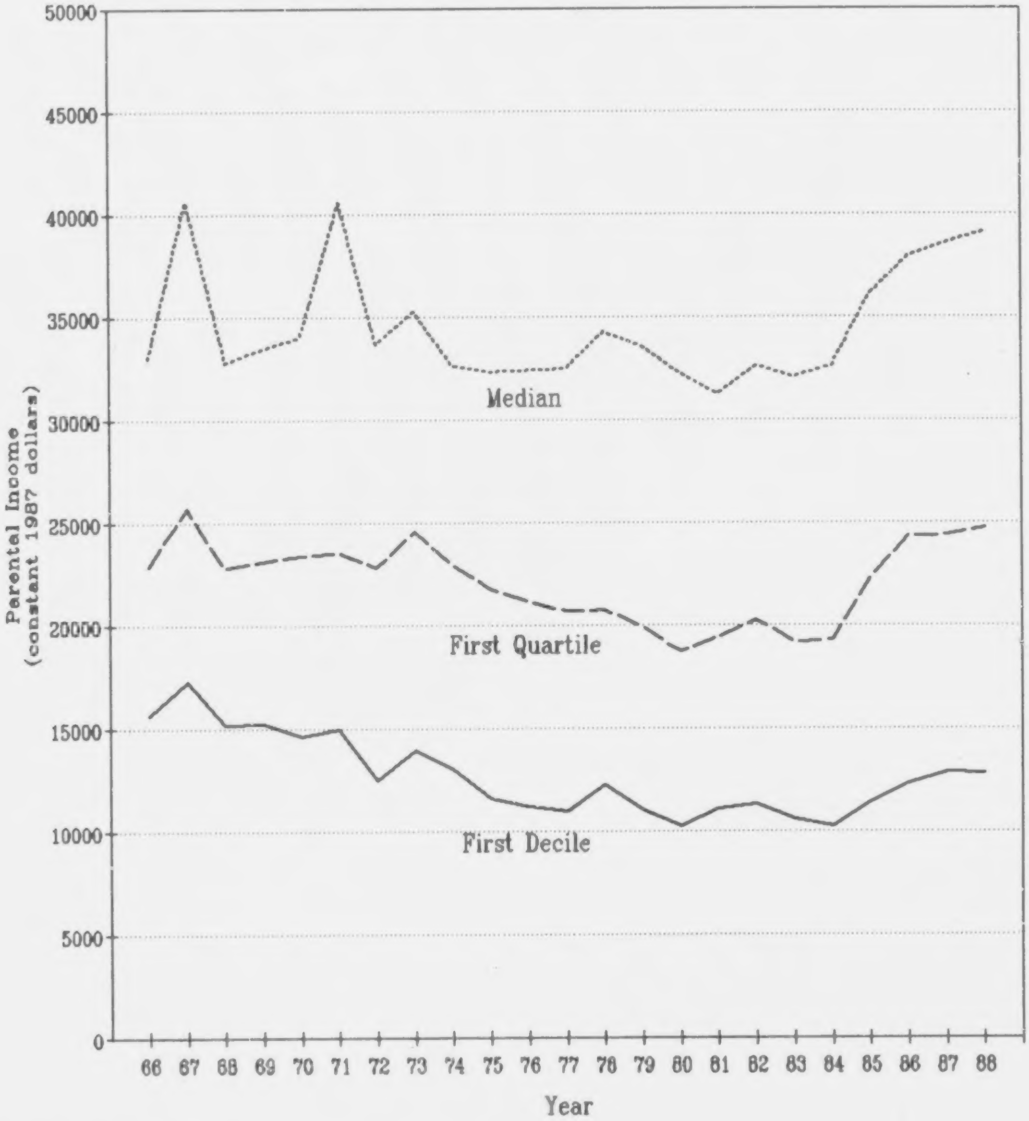
National College Freshmen Norms

For more than two decades, the American Council on Education and the University of California at Los Angeles (Cooperative Institutional Research Program) have monitored the characteristics of American college freshmen through an annual survey. The reports from this survey provide descriptive information including the family income characteristics of first-time, full-time college freshmen. The 1983 report noted the following:

> The incomes of the students' parents showed unusual trends in the 1983 survey. While the percentage of families earning high incomes ($40,000 or more) went up (from 24.9 to 26.9), the percent earning low incomes (less than $12,500) also increased (from 15.7 to 16.5). This pattern is unprecedented in the history of the survey. In every one of the previous seventeen surveys, low incomes have declined and high incomes have increased, no doubt reflecting the effects of inflation. Although we cannot be sure of the reasons for this year's unique pattern, it may be that recent economic events have served to redistribute income from the less to the more wealthy. (Astin, et al., 1983, p. 4)

Analysis of the CIRP data on American college freshmen provides a partial reflection of the general trend of family income redistribution over the last several decades. Figure 7 shows the first decile, first quartile and median parental incomes in constant 1987 dollars as reported by college freshmen between 1966 and 1988. Between 1966 and 1980, the parental income reported by first decile freshmen declined from over $15,000 to about $10,000. That is, the lowest 10 percent of all American college freshmen came from declining parental real income levels during this period of time. This income figure held nearly constant through 1984, then began to rise. The implication of this finding, especially up to 1980, is that higher educational opportunity expanded for students from families with very low incomes between the mid-1960s through about 1980, but has not continued since 1980 and especially since 1984. The same holds true for the number of students in the first quartile of parental income.

FIGURE 7
PARENTAL INCOME AT DECILE, QUARTILE AND MEDIAN FOR AMERICAN COLLEGE FRESHMEN
1966-1988



Source: National College Freshmen Norms.

Profiles of Federal Student Aid Applicants

The universe of financial aid applicants is most nearly approximated by the federal Pell Grant Program applicant file. All applicants for Title IV federal student financial aid have been entered into this common data base since 1978-79. Mortenson (1985) analyzed these data in regard to the family income distributions of dependent and independent aid applicants for the academic years between 1976-77 and 1983-84. (Following 1983-84, the federal reports on which this study was based were discontinued.)

For 1977-78 through 1980-81, the federal financial aid applicant file for dependents showed a decline in the proportion of lowest income applicants. Beginning with 1981-82, however, the proportion of lowest income applicants began to increase. In constant dollars, median family income dropped by 14 percent, from about $28,000 to about $24,000. For independent aid applicants, the results show steady increase in the number of low income applicants. Median family income in constant dollars for independent applicants dropped by 26 percent, from about $6,500 in 1976-77 to about $4,800 by 1983-84.

The evidence here is more complete and conclusive: the average financial resources presented by aid applicants declined between 1980-81 and 1983-84 for dependent applicants, and between 1976-77 and 1983-84 for independent applicants. This decline occurred because of the growth in lowest income aid applicants in the applicant population.

Illinois Aid Applicants

A more complete and focused perspective on the financial aid applicant population is available from the state grant applicant files of the Illinois State Scholarship Commission. Data from these files span the years 1977-78 through 1987-88. Note that in 1982-83, ISSC altered the way in which aid applicant information was collected, a change that brought in additional lower income aid applicants and alters some of the comparability of the data shown in Table 2.

Nevertheless, the data in Table 2 reveal several very important trends. Mean taxable income for Illinois state grant dependent applicants increased from 1977-78, peaked in 1979-80, declined to a bottom in 1984-85, and has increased each year since then through 1987-88. About the same pattern holds up for family assets: increase from 1977-78 to a peak in 1979-80, followed by decline through 1985-86, and then two years of increase. This pattern holds for both father's and mother's incomes, and is also true for independent applicant taxable income and assets.

Generally, the growth in the low income proportion of the total family income distribution appears to have impacted the student financial aid applicant population most notably between 1980 and 1984. Since 1985 income and assets have increased for both dependent and independent aid applicants. Whether this means that the economic condition of the poorer families in America has improved, or that the poorer families have dropped out of higher education cannot yet be determined.

TABLE 2

Illinois Monetary Award Program Applicant Characteristics
1977-78 to 1987-88

(all dollar amounts are constant 1982 dollars)

	Academic Year										
	77-78	78-79	79-80	80-81	81-82	82-83	83-84	84-85	85-86	86-87	87-88
Dependent Applicant Decisions											
Tally	68,263	74,718	93,736	89,215	93,602	119,077	121,512	120,545	120,617	125,754	113,236
% 2 Parents Together	73%	73%	72%	72%	71%	64%	64%	64%	64%	65%	68%
Mean Age Oldest Parent	49	49	49	48	48	47	48	48	48	48	47
Mean Household Size	5.4	5.3	5.3	5.1	5.1	4.5	4.5	4.4	4.3	4.2	4.2
Mean # in College	2.1	2.1	2.1	2.0	2.1	1.6	1.6	1.6	1.5	1.5	1.5
% Own Homes	76%	76%	78%	78%	78%	69%	68%	69%	68%	70%	72%
% With Tax Income	94%	94%	94%	95%	94%	77%	81%	79%	84%	86%	90%
Mean Tax Income	$25,650	$26,275	$27,734	$27,190	$25,604	$19,577	$19,378	$18,839	$20,535	$21,861	$23,946
% With No-Tax Income	21%	21%	19%	20%	20%	37%	33%	43%	34%	39%	DNA
Mean No-Tax Income	$6,206	$5,688	$5,806	$5,389	$5,287	$1,649	$1,538	$1,648	$1,393	$1,413	DNA
% With Fathers Income	69%	68%	70%	69%	67%	54%	56%	54%	58%	60%	64%
Mean Fathers Income	$24,283	$25,235	$26,360	$25,804	$24,418	$13,096	$12,789	$12,456	$13,494	$14,475	$15,789
% With Mothers Income	57%	58%	59%	62%	63%	55%	58%	58%	63%	66%	70%
Mean Mothers Income	$10,802	$10,886	$11,041	$10,715	$10,319	$6,020	$6,234	$6,218	$6,882	$7,269	$8,063
% With Assets	87%	87%	87%	88%	87%	80%	80%	80%	80%	83%	85%
Mean Assets	$48,086	$50,385	$59,403	$58,361	$53,137	$35,151	$34,060	$33,799	$33,494	$34,396	$35,183
% Zero Parent Contrib	42%	37%	29%	28%	25%	24%	27%	27%	26%	23%	21%
Mean Parent Contrib	$2,409	$2,639	$3,547	$3,410	$4,006	$2,824	$2,577	$2,910	$3,080	$3,784	$3,450
Independent Applicant Decisions											
Tally	42,313	43,985	54,261	49,636	61,322	80,107	86,804	86,586	91,088	93,717	87,709
% Married	23%	23%	25%	25%	24%	27%	26%	25%	24%	25%	25%
Mean Household Size	3.2	3.1	3.1	2.7	2.7	2.2	2.2	2.2	2.2	2.3	2.3
Mean Number in College	1.2	1.2	1.2	1.3	1.4	1.1	1.1	1.1	1.1	1.1	1.1
% Own Home	12%	13%	14%	14%	13%	12%	12%	12%	11%	12%	13%
% Tax Filers	49%	48%	42%	39%	40%	DNA	41%	44%	36%	36%	DNA
% With Tax Income	51%	52%	56%	61%	60%	51%	53%	49%	57%	63%	67%
Mean Tax Income	$12,716	$12,008	$12,581	$11,459	$10,782	$4,975	$4,719	$4,444	$5,212	$5,666	$6,382
% With Non-Tax Income	38%	36%	33%	31%	32%	18%	21%	21%	17%	19%	DNA
Mean Non-Tax Income	$5,085	$4,897	$4,679	$4,267	$3,949	$506	$645	$502	$367	$360	DNA
% With Assets	32%	31%	35%	36%	34%	42%	41%	41%	41%	48%	49%
Mean Assets	$8,932	$10,000	$11,464	$10,597	$9,814	$2,510	$2,373	$2,184	$1,992	$2,090	$2,132
% Zero SAI	46%	45%	46%	50%	51%	64%	66%	67%	66%	64%	59%
Mean SAI	$3,137	$3,272	$2,301	$1,460	$1,314	$2,345	$2,144	$2,165	$2,279	$2,447	$1,033

Source: Illinois State Scholarship Commission.

College Enrollment Shifts by Family Income

National College Freshmen Norms

Besides the growth in low income college freshmen in American higher education generally, the CIRP National College Freshmen Norms data indicate that the poorest freshmen have become increasingly concentrated in two-year institutions. Special analyses of the CIRP data files conducted at ACT are summarized in Table 3 for college freshmen from poverty level family income backgrounds. Between 1980 and 1986, the proportion of college freshmen from poverty level family incomes enrolled in public two-year colleges increased from 32.0 percent to 39.7 percent. At the same time, the proportion of poverty level freshmen enrolled in public four-year colleges declined from 32.2 percent to 30.0 percent, and in public universities from 12.1 percent to 7.3 percent. In private institutions, poverty level freshmen increased in two- and four-year colleges, and declined in private universities.

TABLE 3

Distribution of Poverty Level American College Freshmen by Level and Control of Institution 1978 to 1986

	1978	1979	1980	1982	1984	1985	1986
Public Colleges							
2 Year Colleges	37.4%	33.9%	32.0%	36.0%	34.8%	34.4%	39.7%
4 Year Colleges	26.8	33.3	32.2	27.2	30.9	30.7	30.0
Universities	13.1	12.3	12.1	15.6	9.6	11.2	7.3
Subtotal	77.3	79.6	76.3	78.8	75.3	76.3	76.9
Private Colleges							
2 Year Colleges	2.9	3.0	3.4	4.9	6.1	4.7	4.6
4 Year Colleges	14.4	14.4	15.2	13.6	15.9	15.3	16.1
Universities	5.4	3.1	5.1	2.8	2.7	3.7	2.4
Subtotal	22.7	20.4	23.7	21.2	24.7	23.7	23.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: National College Freshmen Norms.

These data suggest that college choice for the poorest of American college freshmen had deteriorated by the mid 1980s from the levels of the late 1970s. Increasingly freshmen from the poorest family income backgrounds are concentrated in public two-year colleges, while they have nearly disappeared from public and private universities.

Illinois Aid Applicants

A similar pattern of enrollment redistribution along family income lines has occurred in Illinois among dependent aid applicants during the 1980s. These data, collected by the Illinois State Scholarship Commission as a routine part of its state grant application system, were analyzed by Mortenson (1986) as a part of a study of enrollment choice problems faced by Illinois grant applicants.

Between 1979-80 and 1985-86, state grant applicants were redistributed across collegiate types along family income lines. At the lower end of the family income distribution, state grant applicants were increasingly applying for state grants to attend public community colleges. Illinois community colleges were attracting an increasing share of state grant applicants from both public universities and private colleges and universities up to family income levels of about $20,000 per year (1978 dollars). (See Figure 8.)

Above about $20,000 per year, public universities were attracting an increasing share of state grant applicants--mostly at the expense of private colleges and universities. For example, in the $20,000 to $25,000 family income range, public universities increased their share of state grant applicants by 4.6 percent, while community colleges lost 1.7 percent and private colleges and universities lost 2.9 percent in this range. At family incomes in the $30,000 to $40,000 range, public universities gained 9.7 percent in market share of state grant applicants, compared to a 1.1 percent loss for community colleges and an 8.6 percent loss for private colleges and universities.

The Illinois data, like the National College Freshmen Norms data, show a redistribution of collegiate enrollments along family income lines across different types of collegiate institutions. Increasingly, lowest income students have been concentrated in the least expensive institutions--public two-year colleges. Illinois students from more middle income family backgrounds appear to have shifted their enrollments from private colleges and universities to public universities.

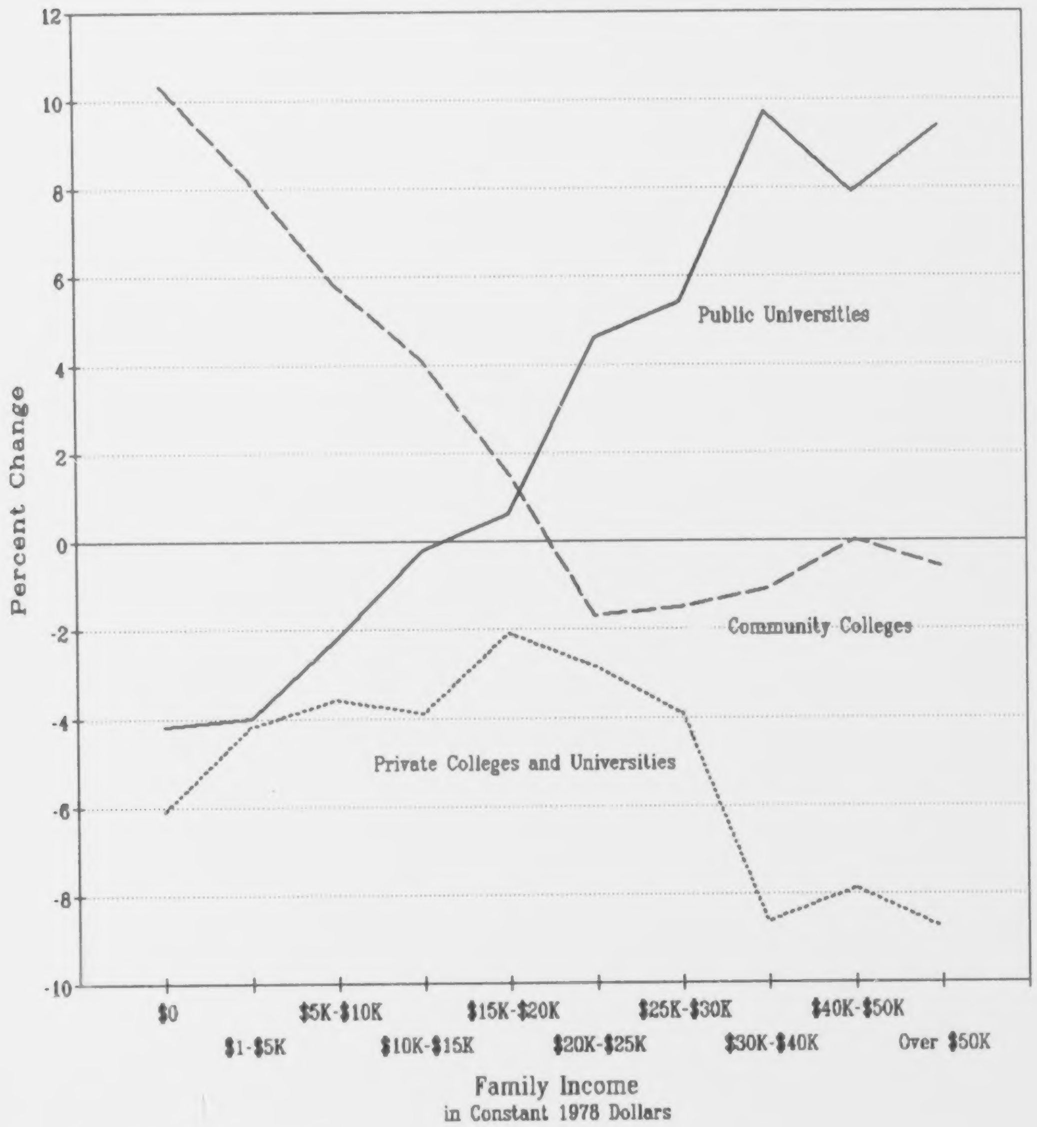
College Attendance Costs and Expected Family Contribution

Finally, this study examined the relationship between family income, expected family contribution through need analysis, college attendance costs, and the need for financial aid for children from different income levels to be able to afford college.

College Attendance Costs

To obtain the benefits of higher education, students incur costs. These costs are of four types: direct, indirect, opportunity, and risk. Direct costs are those expenses faced by an individual that occur only through college attendance, such as tuition, fees, books, and supplies. Indirect costs are living costs faced while going to college, and include food, housing, transportation, and personal and medical care. Opportunity costs are associated with the alternative use of one's resources, such as foregone income while attending college and other uses of one's money, such as better housing or a newer car. Risk is a cost-like consideration faced by the student; that is, what are his or her chances of gaining the future rewards of a college education while these costs are accumulating?

FIGURE 8
REDISTRIBUTION OF DEPENDENT ILLINOIS STATE GRANT APPLICANTS BY FAMILY INCOME AND COLLEGE TYPE BETWEEN 1979-80 AND 1985-86



Source: Illinois State Scholarship Commission.

This section examines direct and indirect cost issues faced by students and their families in attending college from the perspective of family income and ability to pay. For the following discussion, the basis for determining a student's need for financial aid is:

College Budget: Tuition and fees
+ Books and Supplies
+ Food and housing for nine months
+ Transportation to class
+ Personal and miscellaneous expenses

Family Contribution: - Parent's contribution
- Student's contribution

= Financial need

Note that in student financial aid only direct and indirect college attendance costs are considered in evaluating student need. Neither risk nor opportunity costs are ordinarily addressed through financial aid despite their obvious implications for student enrollment behavior.

Data on average college attendance costs faced by students are available from a variety of sources, none of which is complete or unbiased. Therefore, for the following illustration we will construct average direct and indirect college attendance costs for a full-time undergraduate for 9 months of study at public and private colleges and universities. These data for 1987-88 are shown in the following table, and for each year 1977-78 through 1987-88 in Appendix Table A1.

TABLE 4

National Average College Budgets by Level and Control of Institution for Full-time, Nine Month Undergraduate Dependent Students*
1987-88

Average College Budgets	Public 2 Year[a]	 4 Year[b]	 University[b]	Private 2 Year[a]	 4 Year[b]	 University[b]
Tuition and Fees	$ 690	$ 1320	$ 1750	$ 3910	$ 6670	$ 8770
Books and Supplies	359	376	381	387	395	414
Food and Housing	2751	2810	3010	2751	3380	4560
Transportation	479	295	295	479	295	295
Personal & Misc.	1744	1372	1372	1744	1372	1372
Total Costs	$ 6023	$ 6173	$ 6808	$ 9271	$12,112	$15,411

*Source: See Appendix Table A1.
[a] Living at home.
[b] Living on campus.

Differences in Families' Abilities to Finance College Costs

Students and their families differ in their abilities to finance the direct and indirect costs incurred by attending college. This variable ability is largely related to family income: families may use savings from prior income, make payments from current income, or they may borrow against future income. But family ability to finance college is also related to age of parents, assets, family size, number of children enrolled in college, and other demands on family resources.

The Uniform Methodology (UM) has provided a widely used guideline for determining a standard expectation for each family to contribute toward their student's direct and indirect college attendance costs. This formula considers many family circumstances, including income and assets, size and number of children enrolled in college. The UM produces an expectation for each family to contribute a certain dollar amount toward the education of its son or daughter based on the family's circumstances.

In the past the student and his or her family could choose to finance the Uniform Methodology family contribution expectation out of future income. That is, one could borrow through the Guaranteed Student Loan Program (GSL) to finance the contribution expected from need analysis of current income and assets, then repay the loan from future earnings. The reduced financial aid resources available to finance student and family need since 1980, however, have altered this picture. Now, eligibility for the federal subsidy for a GSL is determined by need also. Hence, heavily subsidized GSL's are no longer available to families to defer the expectation from current income and assets that results from need analysis. Families that still need to borrow to defer the expected family contribution face higher borrowing costs through more expensive Supplemental Loans for Students (SLS) and Parent Loans for Undergraduate Students (PLUS).

Table 5 illustrates the relationship between parental income and average expected contribution from parental income and assets that resulted from application of the Uniform Methodology to financial aid applicants in 1987-88. Student contributions from income and assets have been excluded from this table, partly because these sums are relatively small but also because such student contributions were not based primarily on actual resources available to the student under the Uniform Methodology. This approach has since been changed in the Congressional Methodology implemented for the 1988-89 academic year. The table was prepared for the U. S. Department of Education from an analysis of a random sample of 82,600 dependent undergraduate ACT financial aid filers for the 1987-88 academic year.

TABLE 5

Parent's Income and Expected Parent Contributions
Under the Uniform Methodology of Needs Analysis
1987-88 Dependent Undergraduate ACT Filers

Parents Income	Cntrbtn	Parents Income	Cntrbtn	Parents Income	Cntrbtn
$0-2999	$ 130	$30,000-32,999	$ 2236	$60,000-62,999	9395
$3000-5999	55	$33,000-35,999	2748	$63,000-65,999	9880
$6000-8999	84	$36,000-38,999	3453	$66,000-68,999	10,434
$9000-11,999	63	$39,000-41,999	4047	$69,000-71,999	11,760
$12,000-14,999	155	$42,000-44,999	4714	$72,000-74,999	12,249
$15,000-17,999	325	$45,000-47,999	5545	$75,000-77,999	13,848
$18,000-20,999	600	$48,000-50,999	6160	$78,000-80,999	14,127
$21,000-23,999	934	$51,000-53,999	6999	$81,000-83,999	14,312
$24,000-26,999	1269	$54,000-56,999	7790	$84,000-86,999	15,123
$27,000-29,999	1733	$57,000-59,999	8226	$87,000-89,999	16,844

Families with Resources to Finance Various College Budgets

The preceding data on college costs and family contributions may be usefully combined to illustrate through what family income levels financial aid is important. Table 6 shows the income levels required to finance direct and indirect college costs through need analysis expected parental contributions.

Table 6 also shows the proportion of American children under 18 in 1986 with sufficient family income to finance these college attendance costs out of parental income and assets based on the Uniform Methodology's expected contribution. Census Bureau surveys of family income for families with school age children provide a useful measure of the proportion of children that would require financial aid to finance the college costs shown in Table 4. Using 1986 family income data, about 77 percent of all children would require financial aid to be able to attend a public two-year college--the least costly option; 80 percent of all children would require aid to attend a public university; and more than 93 percent would require financial aid to attend an average cost private four-year college.

TABLE 6

Average Family Incomes Required to Finance
Average Dependent Undergraduate College Budgets by Institutional Type
1987-88

		Public			Private	
	2 Year	4 Year	University	2 Year	4 Year	University
Average College Attendance Costs	$ 6023	$ 6173	$ 6808	$ 9271	$12,112	$15,411
Required Parental Contribution	$ 6023	$ 6173	$ 6808	$ 9271	$12,112	$15,411
Corresponding Parental Income	$49,866	$50,584	$53,624	$65,413	$79,012	$94,804
Percent of Children in Families that Earn This Much or More:						
All families	18.2%	17.6%	15.4%	8.9%	LT 5.5%	LT 5.5%
Married couples	23.0	22.3	19.5	11.3	LT 7.0	LT 7.0
Single females	1.7	1.6	1.3	.5	LT .3	LT .3

Another illustration of the distribution of children in families by family income appears in Figure 9, which shows the number of children under 18 who live in families that will require financial aid to be able to pay direct and indirect college attendance costs unless their economic situation improves by the time the children are ready to enter college.

Figure 9

Distribution of Children by Family Income
Compared to Income Required to Finance College Budgets
1987-88 College Budgets, 1986 Family Incomes

```
===============================================================================

Average Cost           Total Family
Institutions           Money Income

                                   /|\
                       $100,000 ____|+
                                    |MM
Private University ---------------->|MM
                                    |MM
                                    |MM
                                    |MM
                                    |MM
                                    |MM       Numbers of Children:
                                    |MMM      O/F/M = 100,000 children
Private 4 Year College ------------>|MMM      M=in married couple families
                         $75,000 ___|MMM      F=in families with single female
                                    |MMM        head, no husband present
                                    |MMMM     O=in other families, including
                                    |MMMMM      male head, no wife present
Private 2 Year College ------------>|MMMMMMM
                         $60,000 ___|MMMMMMMM
                                    |MMMMMMMMMM
                                    |MMMMMMMMMMM
Public University ----------------->|MMMMMMMMMMM
Public 2 & 4 Year ------>$50,000 ___|O F MMMMMMMMMMM
                                    |MMMMMMMMMMMMMMM
                                    |O F MMMMMMMMMMMMMMM
                                    |MMMMMMMMMMMMMMMMMMM
                         $40,000____|O F MMMMMMMMMMMMMMMMMMM
                                    |O FF MMMMMMMMMMMMMMMMMMMMMMMMM
                                    |O FF MMMMMMMMMMMMMMMMMMMMM
                         $30,000 ___|O FF MMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
                                    |O FFF MMMMMMMMMMMMMMMMMMMMMMM
                                    |O FFF MMMMMMMMMMMMMMMMMMMMMMMMMMM
                                    |O FFFF MMMMMMMMMMMMMMMMMMMMMMMM
                         $20,000 ___|O FFFFFF MMMMMMMMMMMMMMMMMMMMMMM
                                    |O FFFFF MMMMMMMMMMMMMMMMMMM
                                    |O FFFFFFFF MMMMMMMMMMMMMMMMMMMMM
                                    |O FFFFFFFFF MMMMMMMMMMMMMMMM
                         $10,000 ___|O FFFFFFFFFFF MMMMMMMMMMMMMMMMMM
                                    |O FFFFFFFFFFFFF MMMMMMMMMMMMM
                                    |O FFFFFFFFFFFFFFFFFFFFFF MMMMMMM
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  ----------------------------------0-----------------------------------

         College Costs                              Number of Children
```

Figure 10 shows the number of children in American families that had sufficient income to be able to pay the direct and indirect costs of attending a public two-year college for each year between 1977-78 and 1987-88. This chart shows that in the last decade no more than one out of four children lived in families with sufficient income to pay the direct and indirect costs of attending a public two-year college. The pattern shown in Figure 10 highlights the impact of economic recession on the fortunes of families raising America's children. In 1981-82--a recession year--only one in ten children lived in families earning enough money to pay for a year of the least expensive collegiate education.

Finally, Figure 11 shows the estimated average family income required through need analysis to finance direct and indirect college attendance costs at public and private two-year and four-year colleges and universities from 1977-78 through 1987-88. For the most recent year shown, family incomes required to finance college range from a low of $49,900 for a public two-year college to a high of $94,800 at an average cost private university.

Summary

The aggregate need for student financial aid is driven by three factors: the number of aid applicants, the income and assets presented by each applicant, and the college attendance costs that they face. This paper has explored one of these, the family resources available to aid applicants.

About 90 percent of the expected family contribution derived from need analysis by ACT Family Financial Statement filers is produced by income; the rest comes from asset assessment. Thus, changes in family income will have an immediate and substantial impact on the requirements for financial aid to assist families in financing direct and indirect college attendance costs.

Since 1970 American families have been redistributed along the income spectrum. There are today substantially more families referred to in this paper as "affluent" that have incomes above 125 percent of median family income. Also, there are substantially more families termed "poor" in this paper with incomes below 75 percent of median family income. This means, of course, that there are substantially fewer "middle income" families with incomes between 75 percent and 125 percent of median family income.

A number of family income issues affect children in the years leading up to college. One of these is family structure: a declining proportion of American children are being raised in two parent families. Married couple families have far greater income than the single female-headed families that are becoming a larger proportion of all families. Concurrently, a larger proportion of children are now being raised in poverty than was the case between about 1966 and 1980. Black and Hispanic children, in particular, are vulnerable: about two out of five now live at or below the poverty line.

FIGURE 10
PROPORTION OF AMERICAN CHILDREN IN FAMILIES EARNING ENOUGH MONEY TO PAY FOR MINIMUM COST PUBLIC COLLEGE FROM PARENTAL RESOURCES, 1977-78 to 1987-88

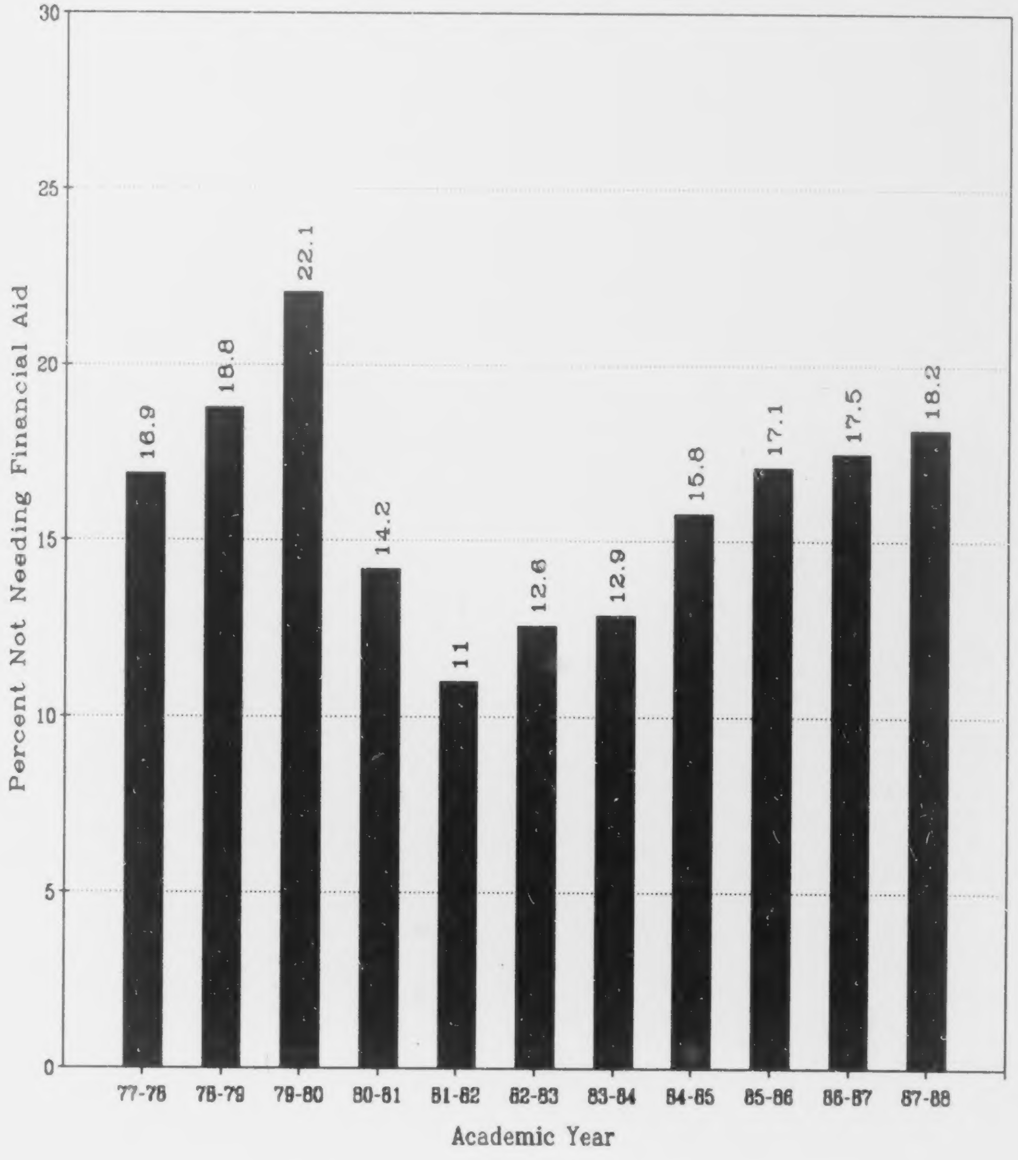
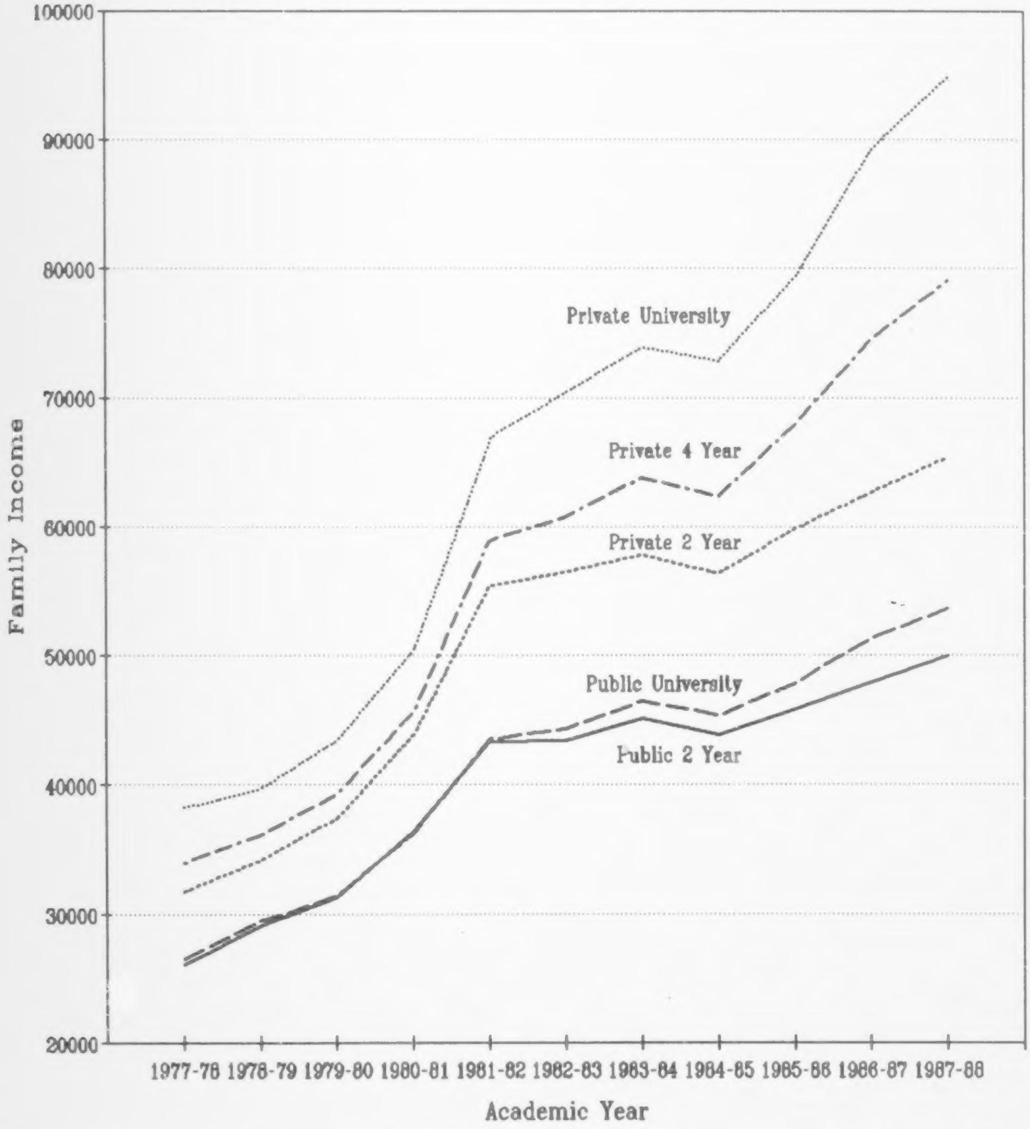


FIGURE 11
ESTIMATED FAMILY INCOME REQUIRED TO FINANCE COLLEGE ATTENDANCE COSTS AT PUBLIC AND PRIVATE COLLEGES
1977-78 TO 1987-88



Source: ACT FFS data prepared for U.S. Dept. of Education.

The redistribution of American families by income has been at least partially reflected in the family income profiles of college freshmen. Between the mid-1960s and the early 1980s, parental income at the first quartile of American college freshmen declined, in constant dollars, from about $25,000 to about $19,000. This decline could have resulted from an increase in children from low income families, from the expansion of student financial aid, or from some combination of these and other factors. In any case, there were more children from low income families enrolling in college until 1980. Then, between 1980 and 1984, the proportion of college freshmen from low income families stabilized. And between 1984 and 1987 this proportion actually declined.

A similar pattern exists among student financial aid applicants. Especially between 1980 and 1985, the mean constant dollar income and assets presented by aid applicants declined. Since 1985 these means have increased.

More than three children in four now live in families that will require financial aid under the expectations of need assessment to be able to pay college attendance costs at the least costly form of higher education, a community college. In the early 1980s, during a period of economic recession, about nine children in ten lived in a family that lacked sufficient income to pay these costs without aid.

In the future, the proportion of children in families that will require financial aid will depend on economic cycles of expansion and recession, the income available to families, and the college costs they face. The aggregate of this need will be presented as the need for funds to achieve enrollment equity objectives of access, choice, and persistence of student financial aid.

More likely than not, these student aid funds will not be available from traditional major funding sources. Federal budget problems and state reluctance to shift higher educational subsidies away from institutions and toward needy students will result in fewer financial aid resources for aid applicants than the aggregate of their need presents. Quite likely the trends of the last decade will continue: enrollment shifts toward less expensive institutions, institutionally funded aid programs to make up for shortfalls in federal and state programs, continued reliance on loans instead of grants, and greater encouragement of families to anticipate the costs of college through savings programs. None of these trends will serve the higher educational opportunity aims of student financial aid for children from poorer families directly or well.

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TABLE A1:
ESTIMATED AVERAGE UNDERGRADUATE COLLEGE ATTENDANCE COSTS
BY CONTROL AND LEVEL OF INSTITUTION, 1977-78 TO 1987-88

	77-78	78-79	79-80	80-81	81-82	82-83	83-84	84-85	85-86	86-87	87-88
A. PUBLIC INSTITUTIONS											
1. 2 Year Colleges, living at home:											
Tuition & Fees (a)	$306	$327	$355	$385	$432	$473	$528	$584	$641	$660	$690
Books & Supplies (b)	$181	$191	$204	$226	$250	$260	$273	$298	$320	$338	$359
Food (c)	$593	$650	$720	$782	$843	$877	$897	$930	$952	$983	$1,023
Housing (c)	$869	$945	$1,060	$1,227	$1,367	$1,466	$1,505	$1,568	$1,630	$1,678	$1,728
Transportation (c)	$268	$281	$321	$378	$424	$441	$451	$472	$484	$465	$479
Personal & Misc (c)	$820	$859	$936	$1,021	$1,122	$1,218	$1,372	$1,465	$1,555	$1,649	$1,744
Total Budget	$3,037	$3,253	$3,596	$4,019	$4,438	$4,735	$5,026	$5,317	$5,582	$5,773	$6,023
2. 4 Year Colleges, living on campus:											
Tuition & Fees (a)	$596	$622	$662	$721	$813	$936	$1,052	$1,117	$1,157	$1,248	$1,320
Books & Supplies (b)	$196	$202	$211	$225	$250	$263	$300	$313	$329	$358	$376
Room & Board (a)	$1,336	$1,405	$1,536	$1,699	$1,888	$2,096	$2,233	$2,401	$2,480	$2,711	$2,810
Transportation (c)	$165	$172	$197	$232	$260	$271	$277	$290	$297	$286	$295
Personal & Misc (c)	$645	$676	$736	$803	$882	$958	$1,079	$1,152	$1,223	$1,297	$1,372
Total Budget	$2,938	$3,077	$3,342	$3,680	$4,093	$4,524	$4,941	$5,273	$5,486	$5,900	$6,173
3. Universities, living on campus:											
Tuition & Fees (a)	$736	$777	$840	$915	$1,042	$1,164	$1,284	$1,386	$1,536	$1,651	$1,750
Books & Supplies (b)	$190	$199	$212	$228	$250	$271	$308	$342	$380	$353	$381
Room & Board (a)	$1,434	$1,512	$1,647	$1,796	$2,037	$2,239	$2,344	$2,513	$2,610	$2,892	$3,010
Transportation (c)	$165	$172	$197	$232	$260	$271	$277	$290	$297	$286	$295
Personal & Misc (c)	$645	$676	$736	$803	$882	$958	$1,079	$1,152	$1,223	$1,297	$1,372
Total Budget	$3,170	$3,336	$3,632	$3,974	$4,471	$4,903	$5,292	$5,683	$6,046	$6,479	$6,808
B. PRIVATE INSTITUTIONS											
1. 2 Year Colleges, living at home:											
Tuition & Fees (a)	$1,706	$1,831	$2,062	$2,413	$2,697	$3,008	$3,099	$3,485	$3,672	$3,684	$3,910
Books & Supplies (b)	$183	$196	$212	$234	$258	$299	$304	$342	$339	$369	$387
Food (c)	$593	$650	$720	$782	$843	$877	$897	$930	$952	$983	$1,023
Housing (c)	$869	$945	$1,060	$1,227	$1,367	$1,466	$1,505	$1,568	$1,630	$1,678	$1,728
Transportation (c)	$268	$281	$321	$378	$424	$441	$451	$472	$484	$465	$479
Personal & Misc (c)	$820	$859	$936	$1,021	$1,122	$1,218	$1,372	$1,465	$1,555	$1,649	$1,744
Total Budget	$4,439	$4,762	$5,311	$6,055	$6,711	$7,309	$7,628	$8,262	$8,632	$8,828	$9,271
2. 4 Year Colleges, living on campus:											
Tuition & Fees (a)	$2,520	$2,771	$3,020	$3,390	$3,855	$4,329	$4,726	$5,135	$5,641	$6,171	$6,670
Books & Supplies (b)	$191	$202	$214	$231	$258	$263	$292	$319	$326	$349	$395
Room & Board (a)	$1,448	$1,555	$1,679	$1,859	$2,094	$2,317	$2,518	$2,714	$2,910	$3,185	$3,380
Transportation (c)	$165	$172	$197	$232	$260	$271	$277	$290	$297	$286	$295
Personal & Misc (c)	$645	$676	$736	$803	$882	$958	$1,079	$1,152	$1,223	$1,297	$1,372
Total Budget	$4,969	$5,376	$5,846	$6,515	$7,349	$8,138	$8,892	$9,610	$10,397	$11,288	$12,112
3. Universities, living on campus:											
Tuition & Fees (a)	$3,240	$3,487	$3,811	$4,275	$4,887	$5,583	$6,217	$6,843	$7,374	$8,118	$8,770
Books & Supplies (b)	$187	$197	$211	$230	$258	$269	$312	$343	$376	$384	$414
Room & Board (a)	$1,793	$1,916	$2,077	$2,291	$2,552	$2,954	$3,090	$3,400	$3,660	$4,263	$4,560
Transportation (c)	$165	$172	$197	$232	$260	$271	$277	$290	$297	$286	$295
Personal & Misc (c)	$645	$676	$736	$803	$882	$958	$1,079	$1,152	$1,223	$1,297	$1,372
Total Budget	$6,030	$6,448	$7,032	$7,831	$8,839	$10,035	$10,975	$12,028	$12,930	$14,348	$15,411

(a) Source: National Center For Education Statistics, US Dept. of Educ.
(b) Source: ACT Budget Survey Questionnaire
(c) Source: California Student Aid Commission, 82-83 survey data.

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Family Income and the Characteristics of College-Bound Students. February, 1967. ACT Research Report No. 17. Leonard L. Baird.

Can Financial Need Analysis Be Simplified? March, 1970. ACT Research Report No. 33. M.D. Orwig and Paul K. Jones.

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Dislocated Workers and Displaced Homemakers

Thomas G. Mortenson

May 1989

ACT

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DISLOCATED WORKERS AND DISPLACED HOMEMAKERS

Thomas G. Mortenson

SUMMARY

This paper summarizes the results of three ACT studies of the new financial aid applicant categories of dislocated workers and displaced homemakers. These new applicant categories, adopted by Congress in the 1986 Amendments to the Higher Education Act of 1965, became effective with the 1988-89 academic year. The three studies were description, verification, and simulation.

The description study combined ACT Assessment and Family Financial Statement records to produce comparative demographic, financial, and academic descriptions of dependent and independent dislocated worker and displaced homemaker aid applicants. The results show differences between those who identify themselves or their parents as either dislocated workers or displaced homemakers and other FFS filers. The displaced homemaker applicants--both dependent and independent--had notably lower incomes than the other two groups. Dependents of displaced homemakers more often reported that their parents had no home equity than did the other two groups. Less than 15 percent of the independent FFS filers who reported that they were displaced homemakers reported any home equity at all, and only 5 percent reported that this equity amounted to $10,000 or more.

The verification study surveyed samples of dependent and independent dislocated worker and displaced homemaker Family Financial Statement filers to confirm their self-reported applicant status. About three-fourths of those to whom the survey was mailed completed and returned the survey for tabulation. The survey results suggest that many of these applicants are incorrectly identified. Only about a third of the survey respondents provided convincing responses on the survey that confirmed their status as dislocated workers or displaced homemakers. About a quarter of the survey respondents provided no evidence whatsoever that they met the dislocated worker/displaced homemaker criteria. The difference--nearly half of the respondents--provided inconclusive evidence in support of their claim to special formula treatment under the Congressional Methodology.

The simulation study compared the effects on expected family contributions of the special formula treatments specified by Congress in the 1986 Amendments. For dislocated workers the simulations compared the expected family contributions under the Congressional Methodology with and without the special treatments for income and home equity. For displaced homemakers the simulations compared the expected family contributions under the CM with and without the special treatment for home equity. For well over half of both the dislocated worker and displaced homemaker applicants, the special treatment did not affect their expected family contributions by more than $100 either way. For most of the remainder, the special formula treatments reduced expected family contributions and thereby qualified such applicants for higher levels of student financial aid if the new family contribution were below college attendance costs. Generally, those who benefited from the special treatments were from higher family incomes than were those who did not benefit.

ACKNOWLEDGMENTS

This project was developed under the encouragement of Mark Heffron at ACT who was concerned about the measure of complexity added to the needs assessment process by the identification of special, new classes of aid applicants in the 1986 Amendments. Clarence Kreiter and Merine Farmer of ACT's research staff were largely responsible for the descriptive portion of this study. Clarence supervised the verification surveys and subsequent data analysis. Mark and Mike Simpson of ACT's Student Need Analysis Service conducted the simulation portion of the study. Julie Divoky and Sarah Logan helped prepare the text for publication.

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DISLOCATED WORKERS AND DISPLACED HOMEMAKERS

Thomas G. Mortenson

Introduction

The 1986 Amendments to the Higher Education Act of 1965 create two new special classes of financial aid applicants in the 1988-89 award year--dislocated workers and displaced homemakers. The 1986 Amendments provide special formulas that differ from the otherwise standard Congressional Methodology with respect to the treatment of income and home equity for the calculation of expected family contribution. This special treatment requires the collection of additional information on the financial aid application form and additional, complex instructions.

Dislocated worker is a classification by a state agency for a person who has been terminated, laid off, or was self-employed but is now unemployed because of poor economic conditions in the community or a natural disaster. In the calculation of their expected family contribution, projected income is used instead of prior year income, and home equity is excluded from available assets.

Displaced homemaker is an individual who has not been employed for at least three years, but during the years has been working in the home providing unpaid services for family members; has been dependent on public assistance or on the income of another family member, or is receiving public assistance because of dependent children in the home; and has been trying to get a job but has not succeeded.

The questions to be addressed in this study are:

- What are the characteristics of applicants who report that they are dislocated/displaced? How are they similar and how are they different from other dependent and independent applicants in basic demographic, economic, and academic dimensions?
- Do dislocated/displaced applicants correctly identify themselves as such on their applications?
- Does special treatment make any difference in their financial aid requirements? For what applicant situations do the exclusion of assets and use of projected rather than prior income make a difference?

Problem Statement

The assessment of applicant need for financial aid is based on the premise that students and their families have the first and primary responsibility for financing college attendance costs. In the collection of information used to evaluate ability to pay, need analysis is confronted with a trade-off between simplicity and fairness. Both are necessary to the effective delivery of student financial aid, but they also contradict each other.

Simplicity requires that the application ask for just enough information to calculate each applicant's ability to pay for college from his or her own resources. The application will use easy to understand words in simple, clear questions, using minimal instructions. Anything more will add confusion--and hence impose barriers to aid and college--that the financial aid system exists to overcome.

Fairness, on the other hand, requires sufficient probing of the applicant's income and assets to completely identify the applicant's ability to finance college expenses from his own resources. Anything less shifts the obligation of paying for college to others--either taxpayers or other financially needy students--to pay for the applicant's college expenses. This need to be fair compromises the need for simplicity, and vice versa. Heffron (1989) has put the dilemma this way:

> The more you know about someone, the better able you are to assess that person's needs and resources, and be sensitive to them. The more questions you ask, however, the more likely you are to ask questions that don't apply to many individuals, the more difficult it becomes to complete the application, and the more likely applicants are to make mistakes. Also, the more complex the form, the greater the chance of creating a psychological barrier that precludes people from even trying to apply. The trick is to find the balance point.
>
> Difficulty is added by the fact that the range of college costs is so great, both poor and upper income people need and apply for aid. The same data are not relevant to each. But putting out different forms for different wealth ranges adds complexity too, particularly for those near the cut-off point. To the difficulty of form completion you add the difficulty of form selection (and the cost of putting out multiple forms).

In 1986 Congress shifted the financial aid application process toward fairness--and away from simplicity--by adding two new classes of financial aid applicants: dislocated workers and displaced homemakers. These additions were incorporated into the aid application forms used by students for the 1988-89 academic year. As a result, questions were added to ACT's Family Financial Statement, and specific instructions were added to the accompanying instruction booklet. This additional information triggers special formula treatments by aid processors involving the assessment of assets and income to calculate an expected family contribution (EFC).

The addition of the two new classes of dislocated worker and displaced homemaker presents all applicants with forms and instructions that include terms that are unfamiliar and irrelevant to better than nine out of ten applicants. The result, as shown in this paper, is that the additional questions apply to few applicants, mistakes are made at high rates in completing the aid application correctly, and the special formula treatments not only benefit few applicants but usually benefit only the most affluent aid applicants in these groups.

Paper Organization

This paper consists of three sections:

1. Description: Comparative tabulations that identify and highlight differences between the dislocated, displaced, and other applicants for financial aid.
2. Verification: Survey of samples of dislocated/displaced applicants to determine the accuracy of their self-identification as such.
3. Simulation: Calculation of EFC's with and without home equity, and with prior year and projected income, as appropriate, for different subpopulations of dislocated/displaced applicants.

Description

The following is a comparative description of ACT Family Financial Statement filers (FFS) who are first classified as dependent or self-supporting, and then within each of these groups are further classified as dislocated worker, displaced homemaker, or other applicant (everyone else) for student financial aid. Before the descriptions are presented, however, we explain the derivation of the data bases developed for this portion of the study.

Data Bases

The data presented in the descriptive portion of the study were developed from a merger of the ACT Assessment Program (AAP) and Student Needs Analysis Service (SNAS) data bases of The American College Testing Program. These two data bases are created from ACT's two core services to American higher education: (a) assessment of the academic preparation of prospective college students for study in higher education, and (b) the assessment of aid applicants' resources to pay college attendance costs.

The ACT Assessment Program (AAP) is administered to over 1.3 million college bound students each year. The Assessment includes an application on which students supply extensive information about their demographic characteristics, interests, special educational needs, extracurricular college plans, factors influencing college choice, high school records, out-of-class experiences, etc. The ACT Assessment itself measures academic preparation for college in four areas: English, mathematics, social studies, and natural science.

ACT's Family Financial Statement (FFS) is filed by about 1.3 million financial aid applicants each year. Information collected on the FFS is strictly limited by federal, state, and institutional reporting requirements to those data elements required to assess the applicant family's resources and data needed to determine aid program eligibility. Nearly all of the descriptive information collected on ACT's AAP application is omitted from the FFS. Therefore, appending the AAP record to the FFS record for those who have completed both greatly enriches the data resources available to describe and analyze student aid applicants, at the same time that some selection bias is introduced when some aid filers lack assessment records.

The matching required that the FFS file for 1988-89 eligibility be processed against AAP files spanning many prior years. The financial aid applicant population includes aid applicants from all age levels, whereas the assessment files contain records for students who typically took the AAP only once, while still in high school. Therefore, a sample of 1988-89 ACT Family Financial Statement (FFS) filers who submitted applications by May 9, 1988, representing all age classes, was matched against the historical cumulative AAP data file to capture the AAP information not collected on the FFS. The historical AAP file covered ACT Assessment takers during the period from 1978 through 1988. AAP and FFS records were matched by Social Security numbers. A summary of the matching experience is presented in Table 1.

TABLE 1

ACT Assessment Program and Family Financial Statement Data Files used in Descriptive Study

		Dislocated Worker	Displaced Homemaker	Others	
Dependent	Population:	29,140		Population:	440,449
	Sample:	29,140		Sample:	11,944
	Percent sample:	100%		Percent sample:	3%
	Matched:	9,109	7,516	Matched:	6783
	Percent matched:	31%	26%	Percent matched:	57%
Self-supporting	Population:	29,460		Population:	264,269
	Sample:	29,460		Sample:	7167
	Percent sample:	100%		Percent sample:	3%
	Matched:	2,170	2,685	Matched:	2880
	Percent matched:	7%	9%	Percent matched:	40%
Combined	Population:	58,600		Population:	704,718
	Sample:	58,600		Sample:	19,111[b]
	Percent sample:	100%		Percent sample:	3%
	Matched:	21,335[a]		Matched:	9,765[c]
	Percent matched:	36%		Percent matched:	51%

Notes:

[a] Applicants could check boxes for both dislocated worker and displaced homemaker. One hundred forty-five did so and therefore appear twice in the above counts.

[b] 20,727 records were selected in 1/34 sampling from population of FFS filers received through May 2, 1988, for the 1988-89 academic year. 19,111 were neither dislocated nor displaced applications. Therefore, 7.8% of the first 700,000+ FFS filers were either dislocated or displaced applications.

[c] 102 FFS filers did not supply information that classified them as dependent or self-supporting. These records were included in the combined analyses but excluded from the dependent/independent analyses.

The results show varying degrees of success in matching AAP and FFS student records. Generally, dependent FFS filers were more likely to have taken the ACT Assessment since 1978 than were self-supporting FFS filers. Undoubtedly this is due to the age of those who filed as self-supporting: the average age of independent filers is 28.3 years and thus a large share could have taken the ACT Assessment prior to 1978. In any case, the following descriptive summaries are limited to those for whom ACT has both AAP and FFS student records, unless noted otherwise.

Dependent Applicants

Tables 2 through 4 summarize the demographic, academic, and economic characteristics of dependent dislocated worker, displaced homemaker, and other applicants who do not fit into these two categories. Note that in the case of dependents, the dislocated worker/displaced homemaker designation refers to the aid applicant's parents--not the aid applicant. Some dependent applicants also checked themselves off as either dislocated workers or displaced homemakers or both. These cases have been treated according to the parental designation.

Dependent FFS filers whose parents were either dislocated workers or displaced homemakers looked similar to dependent filers on the descriptive dimensions of gender, age, marital status, high school grades, and degree aspirations. On all other characteristics, however, differences were apparent.

Dislocated worker: FFS filers with at least one parent who is a dislocated worker are more likely to be minority--especially black--than are other dependent FFS filers. Their average incomes and assets are below those of other FFS filers: their average incomes are 83 percent of other dependent FFS filers, and their assets are 71 percent. Their ACT Assessment scores average about 1.2 standard score points below the averages for other applicants.

Displaced homemaker: Dependent FFS filers with a parent who is a displaced homemaker differ from other dependent filers in several significant ways. Of all displaced homemaker FFS filers, 24 percent were black, compared to 15 percent of dislocated workers and 10 percent of other dependent applicants.

Somewhat surprisingly, 50 percent of the dependent FFS filers who indicated that their parent was a displaced homemaker reported that their parents were married. While this proportion was well below the 75 percent reporting married parents for other dependent aid applicants and 77 percent for those who had a dislocated worker parent, the 1986 Amendments to the Higher Education Act of 1965 define displaced homemaker as an:

DISPLACED HOMEMAKER. - The term 'displaced homemaker' means an individual who -

(1) has not worked in the labor force for a substantial number of years but has, during those years, worked in the home providing unpaid services for family members;

(2) (A) has been dependent on public assistance or on the income of another family member but is no longer supported by that income, or (B) is receiving public assistance on account of dependent children in the home; and

(3) is unemployed or underemployed and is experiencing difficulty in obtaining or upgrading employment.

Although the displaced homemaker class was created to address the plight of the divorced woman left with home equity but without her former husband's financial support, half of those who checked this category also reported married parents.

TABLE 2
Demographic Descriptions of Dependent ACT Family Financial Statement Filers
1988-89

Characteristic		Dislocated Worker[a] (parent)	Displaced Homemaker[a] (parent)	Other[b]
Gender (AAP)				
Males	N	3884	3061	3010
	%	43%	41%	44%
Females	N	5225	4455	3773
	%	57%	59%	56%
Age (FFS)				
Less than 21	N	6334	5161	4642
	%	70%	69%	68%
21 to 24	N	2757	2335	2127
	%	30%	31%	31%
25 and over	N	18	20	14
	%	0%	0%	0%
Race/Ethnicity (AAP)				
White	N	6191	4219	5254
	%	71%	59%	81%
Black	N	1375	1711	637
	%	16%	24%	10%
Mexican/Chicano	N	343	371	175
	%	4%	5%	3%
Puerto Rican/	N	103	111	42
Hispanic	%	1%	2%	1%
Oriental	N	285	299	143
	%	3%	4%	2%
American Indian	N	103	110	64
	%	1%	2%	1%
Marital Status (FFS)				
Single	N	9092	7495	6766
	%	100%	100%	100%
Married	N	9	7	10
	%	0%	0%	0%
Separated	N	2	5	2
	%	0%	0%	0%
Parents Marital Status (FFS)				
Married	N	7008	3727	5022
	%	77%	50%	75%
Divorced	N	1212	1766	1014
	%	13%	24%	15%
Separated	N	329	573	167
	%	4%	8%	3%
Single	N	261	496	177
	%	3%	7%	3%
Widowed	N	282	934	304
	%	3%	12%	5%

Note that tabulated data is for FFS filers on whom ACT also had AAP records.

[a] Dependent dislocated and displaced: N=16,512, 113 marked both.

[b] Other file consists of 6783 records (1/34 sample) of ACT FFS filers through May 2, 1988, who were dependents of neither dislocated workers nor displaced homemakers.

TABLE 3
Economic Descriptions of Dependent ACT Family Financial Statement Filers
1988-89

Characteristics		Dislocated Worker[a] (parent)	Displaced Homemaker[a] (parent)	Others[b]
Mean Total Income (FFS)	$	24,942	17,779	29,782
Total Income Distribution (FFS)				
Negative	N	828	1974	437
	%	9%	26%	6%
0-$5999	N	950	1551	332
	%	10%	21%	5%
$6000-11,999	N	1103	952	601
	%	12%	13%	9%
$12,000-17,999	N	1232	751	852
	%	14%	10%	13%
$18,000-23,999	N	1209	625	851
	%	13%	8%	13%
$24,000-29,999	M	1042	53-	859
	%	11%	7%	13%
$30,000-35,999	N	848	391	775
	%	9%	5%	11%
$36,000-41,999	N	637	267	645
	%	7%	4%	10%
$42,000-47,999	N	473	205	500
	%	5%	3%	7%
$48,000 & over	N	783	269	928
	%	9%	4%	14%
Mean Total Assets (FFS)	$	27,748	24,863	38,937
Mean Cash, Savings and Checking(FFS)	$	2577	2262	3035
Home Equity Distribution (FFS)				
None	N	2637	3124	1570
	%	29%	42%	23%
$1-9999	N	1346	941	1027
	%	15%	13%	15%
$10,000-20,000	N	1705	1131	1213
	%	19%	15%	18%
Over $20,000	N	3421	2320	2973
	%	38%	31%	44%

Note that tabulated data is for FFS filers on whom ACT also had AAP records.

[a] Dependent dislocated and displaced: N=16,512, 113 marked both.

[b] Other file consists of 6783 records (1/34 sample) of ACT FFS filers through May 2, 1988, who were dependents of neither dislocated workers nor displaced homemakers.

TABLE 4

Academic Descriptions of Dependent ACT Family Financial Statement Filers 1988-89

Characteristic		Dislocated Worker[a] (parents)	Displaced Homemaker[a] (parents)	Other[b]
Mean ACT Assessment Scores (AAP)				
Composite	M	18.7	17.7	19.9
English	M	18.4	17.5	19.3
Mathematics	M	17.5	16.3	18.9
Social Studies	M	17.5	16.4	18.6
Natural Science	M	21.2	20.2	22.3
High School Grades (AAP)				
English	M	3.09	3.05	3.17
Mathematics	M	2.83	2.80	2.92
Social Studies	M	3.19	3.16	3.26
Natural Science	M	3.02	2.98	3.06
Degree Aspirations (AAP)				
2 Year College	N	503	459	360
	%	6%	7%	6%
Bachelors Degree	N	3677	2904	2947
	%	43%	41%	46%
Graduate School	N	1495	1196	1165
	%	17%	17%	18%
Professional School	N	2572	2184	1735
	%	30%	31%	27%
Other	N	350	285	218
	%	4%	3%	2%

Note that tabulated data is for FFS filers on whom ACT also had AAP records.

[a] Dependent dislocated and displaced: N=16,512, 113 marked both.

[b] Other file consists of 6783 records (1/34 sample) of ACT FFS filers through May 2, 1988, who were dependents of neither dislocated workers nor displaced homemakers.

Independent Applicants

Tables 5, 6 and 7 summarize the demographic, economic, and academic characteristics of independent ACT FFS filers for 1988-89 for whom ACT also had Assessment records. (Note that only 16 percent of the independent FFS filers who identified themselves as dislocated workers/displaced homemakers had an ACT Assessment record.) Generally, each group's characteristics differed from the other groups' characteristics. About 40 percent of each group, however, aspired to a bachelor's degree from college.

Displaced homemakers: This group was 80 percent female, compared to 50 percent of dislocated workers and 53 percent of other independent aid applicants. They were older than other independents, more likely to be black or American Indian, and had very low incomes (nearly a third had negative total incomes). In this group, 87 percent had no home equity, and only 5 percent had home equity of more than $10,000. This group had low ACT Assessment scores and reported high school grades lower than those reported by other independent FFS filers.

Dislocated workers: This group, though similar to other independent FFS filers with respect to gender, was older, more likely to be married, and reported relatively higher income and assets including home equity. Their high school grades were comparable to those of displaced homemakers and lower than those reported by other independent aid applicants.

Given the relatively few FFS records that could be matched with ACT Assessment records, generalizations from these data are risky. The most important finding from the independent comparisons, however, is quite straightforward: the displaced homemakers stand out from other records by their disproportionate female representation and their relatively low total income distribution.

TABLE 5

Demographic Descriptions of Independent ACT Family Financial Statement Filers 1988-89

Characteristic		Dislocated Worker[a] (self/sp)	Displaced Homemaker[a] (self/sp)	Other[b]
Gender (AAP)				
Males	N	1087	539	1342
	%	50%	20%	47%
Females	N	1083	2146	1538
	%	50%	80%	53%
Age (FFS)				
Less than 21	N	86	201	193
	%	4%	7%	7%
21 to 24	N	643	726	1525
	%	32%	27%	53%
25 and over	N	1391	1758	1162
	%	64%	65%	40%
Race/Ethnicity (AAP)				
White	N	1341	1399	2098
	%	76%	65%	82%
Black	N	193	336	215
	%	11%	16%	8%
Mexican/Chicano	N	62	78	54
	%	4%	4%	2%
Puerto Rican/ Hispanic	N	8	11	20
	%	0%	0%	1%
Oriental	N	20	41	42
	%	1%	2%	2%
American Indian	N	43	87	40
	%	2%	4%	2%
Marital Status (FFS)				
Single	N	1108	1583	1972
	%	51%	59%	69%
Married	N	1009	852	863
	%	47%	32%	30%
Separated	N	53	248	41
	%	2%	9%	1%

Note that tabulated data is for FFS filers on whom ACT also had AAP records.

[a] Dependent dislocated and displaced: N=4842, 13 marked both.

[b] Other file consists of 2880 records (1/34 sample) of ACT FFS filers through May 2, 1988, who were neither dislocated workers nor displaced homemakers.

TABLE 6

Economic Descriptions of Independent ACT Family Financial Statement Filers 1988-89

Characteristic		Dislocated Worker[a] (self/sp)	Displaced Homemaker[a] (self/sp)	Other[b]
Mean Total Income (FFS)	$	13,624	8287	10,374
Total Income Distribution (FFS)				
Negative	N	206	813	280
	%	10%	30%	10%
0-$5999	N	522	1016	1074
	%	24%	38%	37%
$6000-11,999	N	613	470	837
	%	28%	18%	29%
$12,000-17,999	N	385	189	376
	%	18%	7%	13%
$18,000-23,999	N	228	102	162
	%	11%	4%	6%
$24,000-29,999	N	123	42	81
	%	6%	2%	3%
$30,000 & over	N	93	53	70
	%	4%	2%	2%
Mean Total Assets (FFS)	$	2349	1834	1230
Mean Cash, Savings and Checking(FFS)	$	487	288	535
Home Equity Distribution (FFS)				
0	N	1844	2342	2685
	%	85%	87%	93%
$1-9999	N	233	217	149
	%	11%	8%	5%
$10,000-20,000	N	58	77	26
	%	3%	3%	1%
Over $20,000	N	35	49	20
	%	2%	2%	1%

Note that tabulated data is for FFS filers on whom ACT also had AAP records.

[a] Dependent dislocated and displaced: N=4842, 13 marked both.

[b] Other file consists of 2880 records (1/34 sample) of ACT FFS filers through May 2, 1988, who were neither dislocated workers nor displaced homemakers.

TABLE 7

Academic Descriptions of Independent ACT Family Financial Statement Filers 1988-89

Characteristic		Dislocated Worker[a] (self/sp)	Displaced Homemaker[a] (self/sp)	Other[b]
Mean ACT Assessment Scores (AAP)				
Composite	M	17.0	15.9	19.2
English	M	16.6	16.3	18.4
Mathematics	M	14.5	12.7	17.6
Social Studies	M	16.5	15.5	18.6
Natural Science	M	20.0	18.7	21.7
High School Grades (AAP)				
English	M	2.83	2.86	3.08
Mathematics	M	2.57	2.58	2.83
Social Studies	M	2.91	2.85	3.18
Natural Science	M	2.76	2.71	3.00
Degree Aspirations (AAP)				
2 Year College	N	242	333	232
	%	14%	16%	9%
Bachelors	N	702	776	1011
Degree	%	40%	40%	40%
Graduate	N	254	310	463
School	%	14%	15%	18%
Professional	N	411	465	738
School	%	23%	23%	29%
Other	N	153	163	113
	%	3%	8%	4%

Note that tabulated data is for FFS filers on whom ACT also had AAP records.

[a] Dependent dislocated and displaced: N=4842, 13 marked both.

[b] Other file consists of 2880 records (1/34 sample) of ACT FFS filers through May 2, 1988, who were neither dislocated workers nor displaced homemakers.

Verification

The second objective of this study was to verify the self-reported dislocated worker/displaced homemaker status of FFS filers. While the question on the Family Financial Statement was simple and direct, the instructions for how to check off the appropriate response were not. These instructions were written by Congress in the 1986 Amendments and approved by the Office of Management and the Budget (OMB). Also, between the time of the aid application and and the receipt of our survey, the circumstances of the FFS filer could have changed and, in some cases did. Therefore, a focus of this study was to see if FFS filers were correctly identifying themselves as dislocated workers or displaced homemakers and thus appropriately qualifying for the special Congressional Methodology formula treatments specified in the 1986 Amendments.

Survey Design

To verify the correctness of self-reported dislocated worker/displaced homemaker status, questionnaires were prepared that asked specific questions based on the federal instructions. Copies of these four questionnaires are included in the Appendix.

These questionnaires were then distributed to four random samples of 440 dependent/independent dislocated workers/displaced homemakers each. This survey was conducted during the late summer and fall of 1988. The response rates for the four populations were quite high--ranging from 72 percent to 85 percent of deliverable surveys--and are shown in Table 8.

TABLE 8

Sample Sizes and Response Rates for Surveys of Dis'ocated Workers and Displaced Homemakers

	Independent		Dependent		
	Dislocated Worker	Displaced Homemaker	Dislocated Worker	Displaced Homemaker	Total
Sample Size	440	440	440	440	1760
Surveys Delivered	425	422	425	422	1694
Percent Delivered	97%	96%	97%	96%	96%
Surveys Returned	312	360	337	304	1313
Percent of Sample	71%	82%	77%	69%	75%
Percent of Delivered	73%	85%	79%	72%	78%

Results from this survey are shown in Tables 9 through 12. Survey respondents' answers to questions based on the ACT Family Financial Statement instructions (as written by Congress and approved by OMB) were compared to those instructions, and match criteria were developed to judge accuracy of self-classification as a dislocated worker or displaced homemaker.

Dislocated Workers

Independents: The instructions for the dislocated worker who is not dependent on his parents for support state the following:

> Mark "Yes" if either you or your spouse is classified as a dislocated worker by an appropriate state agency (such as the State Employment Service or Job Service) in accordance with Title III of the Job Training Partnership Act. Generally, "dislocated worker" means a person who:
> - has been terminated or laid off,
> - has been laid-off as a result of permanent closure of a plant or other facility, or
> - was self-employed (including farmers) but is now unemployed because of poor economic conditions in the community or a natural disaster.
>
> Mark "No" if neither you nor your spouse is classified by the appropriate State agency as a dislocated worker.
>
> If you marked "Yes," you may be asked to document your status (or that of your spouse) as a dislocated worker.

The survey questionnaire developed to verify the dislocated worker status reported by independent FFS filers was based on these instructions and is shown as Form A in the Appendix. The 312 survey responses were coded, entered into a data file, and then analyzed.

Criteria to verify dislocated worker status were developed as follows. The highest criteria match met all of the following criteria:

1. Respondent reported that self or spouse had been laid-off or terminated from a job.
2. Respondent reported that self or spouse had been classified as a dislocated worker by an appropriate state agency.
3. Respondent gave a valid state agency name for the dislocated worker classification.

The second highest criteria match met only the first two criteria on this list, and the lowest criteria match met only the first criterion on this list. Survey respondents who did not match any of these criteria were thus identified as "Not Matched" in Table 9. These respondents did not indicate that either they or their spouses had ever been laid-off or terminated from a job.

TABLE 9

Independent Dislocated Workers Verification Survey Results

Highest Criteria Match	32%
Next Highest Criteria Match	6%
Lowest Criteria Match	38%
Not Matched	24%
Total	100%

Of the independent dislocated worker respondents, 32 percent met the highest criterion match--they met all three instructional requirements for this classification. At the other extreme, 24 percent of the independent dislocated worker survey respondents provided no evidence that they met any of the three criteria contained in the instructions.

Of the survey respondents, 44 percent fell into a gray area. They affirmed their original FFS classification as a dislocated worker but failed to provide any confirming evidence, even such minimal evidence as indicating they had been so classified by a state agency without naming that agency. Survey respondents who gave an invalid response for the appropriate state agency, such as "Burlington Northern Railroad," fell into this gray area. Other examples of invalid state agencies provided by survey respondents included: ACT, Durbin's 66, Sanyo Mfg. Corp., San Haven State Hospital, Angus Bio-Tech, and Williston Water Dept. Apparently, some FFS filers were confused by the instructions.

Survey respondents were invited to add comments to the questionnaire when they returned it. Of the 312 respondents, 17 did so. Their comments, which add a poignant dimension to this report, are included in the appendix following survey Form A.

Dependents: The instructions for dislocated worker parents of ACT Family Financial Statement filers apply to the parents--not the aid applicant. Our survey, therefore, was addressed to the parents of the aid applicant and all data reported in this paper are based on parental qualifying status. Some dependent FFS filers also reported that they, too, were dislocated workers; these responses have been ignored in this study.

The instructions for dependent dislocated worker status are as follows:

> Mark "Yes" if either of your parents is classified as a dislocated worker by an appropriate State agency (such as the State Employment Service or Job Service) in accordance with Title III of the Job Training Partnership Act. Generally, "dislocated worker" means a person who:
>
> - has been terminated or laid off,
> - has been laid-off as a result of permanent closure of a plant or other facility, or
> - was self-employed (including farmers) but is now unemployed because of poor economic conditions in the community or a natural disaster.
>
> Mark "No" if neither of your parents is classified by the appropriate State agency as a dislocated worker.
>
> If you marked "Yes," you may be asked to document your parent's status as a dislocated worker.

The survey questionnaire developed to verify the dislocated worker status claimed by dependent FFS filers was developed based on these instructions and is shown in the Appendix as Form C. This questionnaire was mailed to parents of FFS filers, and the questions were addressed to these parents.

Criteria to verify the dislocated worker status claimed on the FFS were developed as follows. The highest criteria match met all of the following criteria:

1. Respondent reported that self or spouse had been laid-off or terminated from a job.
2. Respondent reported that self or spouse had been classified as a dislocated worker by an appropriate state agency.
3. Respondent gave a valid state agency name for the dislocated worker classification.

The second highest criteria match met only the first two criteria on this list, and the lowest criteria match met only the first criterion.

TABLE 10

Dependent Dislocated Workers
Verification Survey Results

Highest Criteria Match	31%
Next Highest Criteria Match	3%
Lowest Criteria Match	36%
Not Matched	29%
Total	99%

Of the survey respondents, 31 percent met all of these criteria in the highest match test, another 39 percent met a lower match criteria, and 29 percent--who did not match any of these criteria--were presumed to be incorrectly identified as dislocated workers.

Respondents who indicated that they were classified by some state agency as a dislocated worker but gave an invalid agency name listed such organizations as Illinois Valley College, H. D. Lee, Med-Voc Associates and "none." Few respondents who indicated that they were a dislocated worker bothered to name the state agency on the survey form. Many indicated that they had been unemployed for several years or more.

Of the 337 respondents to this survey, 41 added comments to the survey form. These comments are included in the Appendix following Form C.

Displaced Homemakers

Independents: The federal instructions for the displaced homemaker who is not dependent on his/her parents for support state the following:

> Mark "Yes" if either you or your spouse meet all of the following descriptions for a displaced homemaker:
> - You or your spouse has not worked in the labor force for a substantial number of years (e.g. approximately five years or more), but has during those years worked in the home providing unpaid services for family members;
> - You or your spouse has been dependent on public assistance or on the income of another family

member but is no longer receiving that income, or you or your spouse is receiving public assistance because of dependent children in the home; and

- You or your spouse is unemployed or underemployed and is experiencing difficulty in obtaining or upgrading employment.

"Unemployed" means not working this week but being available for work and having made specific efforts to get a job sometime during the last four weeks.

"Underemployed" means working part-time, even though full-time employment is desired, because work is slack or because only part-time work is available.

Mark "No" if neither you nor your spouse meet all of the descriptions mentioned above.

The survey questionnaire developed to verify the displaced homemaker status reported by independent FFS filers was based on these instructions, and is shown as Form B in the Appendix.

Criteria to verify displaced homemaker status were developed as follows. The highest criteria match met all of the following criteria:

1. Respondent reported that self or spouse was a homemaker providing unpaid services to family members, and
2. Respondent reported that self or spouse:
   a. Had been dependent on public assistance, or
   b. Had been dependent on the income of another family member and was no longer receiving that income, or
   c. Was receiving public assistance for dependent children in the home, and
3. Respondent reported that self or spouse was either unemployed or underemployed.

The next highest match criteria met any two of the above three criteria. The lowest match criteria required a favorable answer to only one of these three criteria. A respondent that failed to meet any of these criteria was considered to be unmatched - or not a displaced homemaker application.

TABLE 11

Independent Displaced Homemakers
Verification Survey Results

Highest Criteria Match	36%
Next Highest Criteria Match	38%
Lowest Criteria Match	21%
Not Matched	5%
Total	100%

Thirty-six percent of the survey respondents met the first match criteria. Fifty-nine percent met either the second or third match criteria. Five percent were not correctly classified as they failed to meet any of the match criteria.

Of the 360 survey respondents, 41 chose to add comments to the questionnaire. These comments are included in the Appendix following the Form B questionnaire used for this group. They offer insights into life's challenges faced by this class of FFS filer.

Dependents: The federal instructions for dependent displaced homemaker status apply to the parents of the applicant and thus the survey was addressed to them. These instructions read as follows:

> Mark "Yes" if either of your parents meets all of the following descriptions for a displaced homemaker:
>
> - Your parent has not worked in the labor force for a substantial number of years (e.g. approximately five years or more), but has during those years worked in the home providing unpaid services for family members;
> - Your parent has been dependent on public assistance or on the income of another family member but is no longer receiving that income, or your parent is receiving public assistance because of dependent children in the home; and
> - Your parent is unemployed or underemployed and is experiencing difficulty in obtaining or upgrading employment.
>
> "Unemployed" means not working this week but being available for work and having made specific efforts to get a job sometime during the last four weeks.
>
> "Underemployed" means working part-time, even though full-time employment is desired, because work is slack or because only part-time work is available.
>
> Mark "No" if neither of your parents meet all of the descriptions mentioned above.

The survey questionnaire developed to verify the displaced homemaker status reported by dependent FFS filers was based on these instructions, and is shown as Form D in the Appendix.

Criteria to verify displaced homemaker status were developed as follows. The highest criteria match met all of the following criteria:

1. Respondent reported that self or spouse was a homemaker providing unpaid services to family members.
2. Respondent reported that self or spouse:
    a. Had been dependent on public assistance, or
    b. Had been dependent on the income of another family member and was no longer receiving that income, or
    c. Was receiving public assistance for dependent children in the home.
3. Respondent reported that self or spouse was either unemployed or underemployed.

The next highest criteria match met any two of the above three criteria, and the lowest match criteria required a favorable answer to only one of these three criteria. A respondent that failed to meet any of these criteria was considered to be unmatched--or not a displaced homemaker application.

TABLE 12

Dependents of Displaced Homemakers
Verification Survey Results

Highest Criteria Match	15%
Next Highest Criteria Match	33%
Lowest Criteria Match	34%
Not Matched	18%
Total	100%

Only 15 percent of the respondents to this survey met the highest criteria match--the lowest proportion of the four groups; 67 percent of the replies fell into the intermediate gray area--they met some but not all of the match criteria; and 18 percent of the surveys provided no information with which to match against the federal instructions and are thus presumably incorrectly classified.

Of the 304 survey respondents in this group, 52 added comments to the survey before returning it. The comment-added rate of 17 percent was higher than for the other four groups surveyed. These comments are included in the Appendix following Form D.

Summary of Verification Surveys

Results of these four surveys indicate that FFS filers who claimed the dislocated worker/displaced homemaker status were often of doubtful eligibility for the special formula treatments provided in the Congressional Methodology. Only about a third of the respondents provided confirming evidence of their status. About one in five provided no indication whatsoever that they were either dislocated workers or displaced homemakers. The remainder provided some information--often incorrect information--in support of their claim to be dislocated workers/displaced homemakers.

A review of these findings suggests some answers. In a few cases FFS filer circumstances had clearly changed between the time the FFS was submitted to ACT and the time of the survey reported here.

A more general problem must clearly be the difficulty of the language in the federal instructions for completing the dislocated worker/displaced homemaker questions on the FFS. We submitted the federal instructions to a writing style analyzer software program (Smetana, 1988) to determine the readability of these instructions. The results are summarized in the following table.

TABLE 13

Readability Analysis of Federal Instructions for Dislocated Workers and Displaced Homemakers

	Grade Level	Flesch Index	Personal Interest Index	Long Words	Syllables per Word	Words per Sentence	Overall Summary
Dislocated Worker	16	33 Fair	18 Poor	18% Poor	1.7 Fair	30 Poor	Needs Work
Displaced Homemaker	14	44 Fair	43 Fair	16% Poor	1.6 Fair	25 Poor	Fair

The federal instructions for the displaced homemaker questions call for a level of education of grade 14 - equivalent to the completion of the sophomore year of college. The instructions for the dislocated worker call for an education through grade 16 - equivalent to that of a college graduate. Both sets of instructions are characterized by long words in long sentences. On none of the five scaled tests do these instructions score above fair on a scale consisting of poor/fair/good/excellent.

Simulation

The third portion of the ACT study of dislocated worker/displaced homemaker FFS filers involved a comparison of family contributions with and without the special formulas prescribed for these aid applicants by Congress in the 1986 Amendments. The 100 percent sample of early 1988-89 FFS filers shown in Table 1 was used for these alternative formula treatments.

Conceptually, the simulation procedures were quite simple. For dislocated workers, expected family contributions were calculated using estimated year incomes without home equity, and base year incomes including home equity. For displaced homemakers, expected family contributions were calculated with and without home equity. In actual practice, however, these simulations were considerably more complex because of the derivation of data elements used in the final calculations.

The results of the simulations for dislocated workers and displaced homemakers are summarized below.

Dislocated Workers

Dependents: Table 14 on the following page shows the distribution of changed expected family contributions from families of dislocated workers. Here the changes are for reductions in EFCs of more than $100, increases of more than $100, and changes of plus or minus $100. The changes are displayed in terms of base year total family income in family income ranges.

TABLE 14

Alternative Formula Simulation Results for Dependents of Dislocated Workers (N=16,153)

Change in Expected Family Contribution	Negative Income	Total Base Year Family Income $0 to $10,000	$10,000 $20,000	$20,000 $30,000	$30,000 $40,000	$40,000 $50,000	Over $50,000	Median Income
-$101 or more	2%	1%	5%	14%	12%	7%	7%	$31,334
-$100 to +$100	5%	17%	16%	4%	1%	0%	0%	$ 9,708
+$101 or more	1%	1%	2%	2%	1%	0%	0%	$20,342
Reduced Expected Family Contribution	30%	7%	22%	71%	88%	94%	97%	

About half of the sample of 16,153 dependents of dislocated workers had their expected family contributions reduced by more than $100 as a result of the special treatment of income and assets offered through the Congressional Methodology; their median total family income was $31,300. About 43 percent experienced changes in their EFCs of plus or minus $100; their median family income was $9700. The remaining 7 percent experienced increases in their EFCs by more than $100 as a result of the Congressional Methodology special formula for dislocated workers; their median family income was $20,300.

Clearly the Congressional Methodology special formula treatment for dependents of dislocated workers reduced the expected family contributions for many FFS filers for 1988-89. The reduced EFCs qualified these applicants for additional financial aid funds. The next question is: Who benefited from the special formula treatment? Table 14 provides the answer. Of the FFS filers from total base year family incomes of above $50,000, 97 percent experienced a reduced EFC, whereas 7 percent with family incomes of $0 to $10,000 per year had a reduced EFC. Clearly, the benefits of the Congressional Methodology treatment apply mainly for FFS filers from family incomes of more than $20,000 per year. The primary beneficiaries of the special formula for dependents of dislocated workers were the most affluent, while the least affluent were largely unaffected by the special formula.

Independents: The changes in expected family contributions from independent applicants where the applicant or the spouse is a dislocated worker are shown in Table 15. Forty-seven percent of the FFS sample of 11,164 had their EFCs reduced by the Congressional Methodology special formula by more than $100, 48 percent experienced no significant change in their EFCs, and 5 percent had their EFCs increased by more than $100.

Dislocated worker status FFS filers were most likely to gain from the Congressional Methodology if their base year total family incomes were $40,000 to $50,000 per year. Ninety-nine percent of those from this income range had their EFCs reduced by $100 or more. In contrast, 20 percent of those from total family incomes of $0 to $10,000 had their EFCs reduced by more than $100 by the special formula contained in the Congressional Methodology.

TABLE 15

Alternative Formula Simulation Results for Independent Dislocated Workers
(N=11,164)

Change in Expected Family Contribution	Negative Income	Total Base Year Family Income $0 to $10,000	$10,000 $20,000	$20,000 $30,000	$30,000 $40,000	$40,000 $50,000	Over $50,000	Median Income
-$101 or more	31%	3%	5%	5%	2%	1%	0%	$15,976
-$100 to +$100	34%	11%	3%	0%	0%	0%	0%	$ 6,259
+$101 or more	4%	1%	0%	0%	0%	0%	0%	$ 8,301
Reduced Expected Family Contribution	45%	20%	58%	91%	97%	99%	90%	

Displaced Homemakers

Dependents: Table 16 summarizes the changes in expected family contributions for dependents of displaced homemakers from the effect of the Congressional Methodology special formula treatment. For 72 percent of the FFS filers, the special treatment did not affect EFCs by more than $100 and thus no benefit was gained. (Remember from Table 2 that 42 percent of these filers reported no home equity at all.)

TABLE 16

Alternative Formula Simulation Results for Dependents of Displaced Homemakers
(N=14,287)

Change in Expected Family Contribution	Negative Income	Total Base Year Family Income $0 to $10,000	$10,000 $20,000	$20,000 $30,000	$30,000 $40,000	$40,000 $50,000	Over $50,000	Median Income
-$101 or more	2%	3%	5%	7%	4%	2%	2%	$24,209
-$100 to +$100	11%	34%	15%	6%	3%	2%	1%	$ 7,352
+$101 or more	1%	0%	1%	1%	0%	0%	0%	$21,250
Reduced Expected Family Contribution	16%	7%	22%	50%	54%	57%	59%	

For 25 percent of the sample, EFCs were reduced by more than $100, and thus the financial aid need of these applicants was increased by the special formula provided for in the Congressional Methodology. The beneficiaries of the Congressional Methodology special formula for dependents of displaced homemakers were mainly from families with incomes of more than $20,000 per year. Above $50,000 per year, 59 percent of the FFS filers had their EFCs reduced by more than $100 due to the CM formula. In contrast, 7 percent of FFS filers with total family incomes of $0 to $10,000 experienced reductions of EFCs by more than $100. Generally, the higher the family income the greater the likelihood of benefiting from the Congressional formula for dependents of displaced homemakers.

Independents: Table 17 summarizes the effects of the special Congressional Methodology formula for independent filers who qualify as displaced homemakers. For 85 percent of the 14,665 FFS filers used in the simulation, no significant change in their EFCs resulted. (Note in Table 6 that 87 percent of this group had no home equity at all.) The EFCs of 12 percent were reduced by the CM by more than $100, and thus gained financial aid eligibility. Three percent had their EFCs increased by the Congressional Methodology in the ACT simulations.

Those most likely to experience reduced expected family contributions from the Congressional Methodology special formula were from total family base year incomes of $30,000 to $40,000 per year. Fifty percent of those in this income range had reduced EFCs of more than $100, compared to 11 percent of those with family base year incomes of $0 to $10,000.

TABLE 17

Alternative Formula Simulation Results for Independent Displaced Homemakers (N=14,665)

Change in Expected Family Contribution	Negative Income	Total Base Year Family Income $0 to $10,000	$10,000 $20,000	$20,000 $30,000	$30,000 $40,000	$40,000 $50,000	Over $50,000	Median Income
-$101 or more	6%	3%	1%	1%	0%	0%	0%	$7,289
-$100 to +$100	54%	27%	3%	1%	0%	0%	0%	$4,691
+$101 or more	2%	0%	0%	0%	0%	0%	0%	$8,046
Reduced Expected Family Contribution	10%	11%	34%	45%	50%	48%	45%	

Summary of Simulations

The simulations of alternative formula treatments of income and assets presented here illustrate that many FFS filers had their expected family contributions reduced by the special formulas provided for dislocated workers and displaced homemakers through the Congressional Methodology. The reductions in expected family contributions had the effect of qualifying those benefited for increased amounts of need-based student financial aid. Within the samples of FFS filers used in this study, the proportions of benefited aid applicants were 50 percent of dependents of dislocated workers, 25 percent of dependents of displaced homemakers, 47 percent of independent dislocated workers, and 12 percent of independent displaced homemakers.

In each of the four populations, the least affluent were the least likely to have their expected family contributions reduced by the special formulas provided in the Congressional Methodology. Generally, the applicants with the highest total base year family incomes were those most likely to have their EFCs reduced by more than $100.

This apparent paradox--increasing aid eligibility for more affluent aid applicants and least for the least affluent--is a direct result of the formula devices chosen in the Congressional Methodology. For example, 87 percent of independent displaced homemakers report no home equity at all, and this population obviously cannot benefit if home equity is excluded from calculating a family's expected family contribution. However, more affluent families with home equity above amounts protected by asset protection allowances in the Congressional Methodology will clearly benefit by the removal of that home equity from the calculation. And the more home equity the applicant reports, the greater the benefit if it is excluded from the expected family contribution calculation.

Discussion

This project set out to address three questions, and three studies that are presented in this report were prepared in response to these questions.

> **What are the characteristics of applicants who report that they are dislocated/displaced? How are they similar and how are they different from other dependent and independent applicants in basic demographic, economic, and academic dimensions?**

We have used ACT's data bases on Family Financial Statement filers and ACT Assessment Program test takers to describe and contrast dependent and independent aid applicants who have claimed the dislocated worker or displaced homemaker status on their 1988-89 FFS. The results are presented in Table 2 through 7 in the text.

Dependents of dislocated workers or displaced homemakers are similar to other dependent aid applicants in many respects, such as gender, age, marital status, high school grades, and degree aspirations. They differ in other respects. The dependents of dislocated workers and displaced homemakers are more likely to be minority (especially black, Chicano, or Oriental), have less income and assets, and have scored somewhat lower on the ACT Assessment than other dependent applicants. Dependents of displaced homemakers, in particular, are less likely to have married parents, have lower family incomes, and are less likely to have any home equity than other dependent aid applicants.

Independent aid applicants who claim dislocated worker or displaced homemaker status on their FFS tend to look similar to other independent aid applicants regarding degree aspirations, but little else. The displaced homemaker applicants are predominantly female, age 25 and over, with lower average incomes and ACT Assessment scores than other independent applicants. They also tend to be more often of a minority--especially blacks and American

Indians--and to be separated or divorced. Dislocated worker applicants are more likely to be older, married, and have higher base year incomes and greater assets than other independent applicants.

Do dislocated/displaced applicants correctly identify themselves as such on their applications?

Our mail survey of FFS filers who claimed the dislocated worker or displaced homemaker status had a high response rate--about three quarters of those surveyed responded. The high response rate provides one sense of confidence in the representativeness of the respondents to the population of FFS filers. However, the information provided by respondents to verify their claimed status provides far less assurance that they correctly identified themselves as eligible for the special formulas provided in the Congressional Methodology.

Only about a third of the respondents to the four surveys provided evidence that they were correctly classified in the dislocated worker or displaced homemaker categories. About a quarter of the respondents failed to provide any supporting evidence for their claim. The remainder provided incomplete or erroneous information that left some doubt about their status.

Several reasons for this muddled state are apparent. First, the circumstances of some respondents had clearly changed in the several months between the time they filed their FFS with ACT and when the survey was distributed. Second, the federal instructions required a high level of education to understand: long sentences and long words made them less intelligible to many; the dislocated worker instructions, in particular, required a college graduate reading level to apply for aid to help send the applicant to college in the first place. The ideas of a displaced worker or displaced homemaker are not difficult to grasp. Unfortunately, the conversion of the apparent legislative intent into gender-neutral language that addresses all possible circumstances of marriage crippled its application.

The possibility of fraud is also present. Especially in the case of the quarter of the respondents that provided no supporting evidence whatsoever for their claim, further verification efforts would be advisable. For whatever reason--changed circumstances, confusion, or fraud--the application of the concepts of displaced homemaker and dislocated worker are an unresolved challenge of the aid application system.

Does special treatment make any difference in their financial aid requirements? For what applicant situations do the exclusion of assets and use of projected rather than prior income make a difference?

Our efforts to determine whether special formula treatments for dislocated worker and displaced homemaker aid applicants made a difference were more conclusive than the verification study. Clearly, there were many aid applicants whose expected family contributions declined and thus made them more financially "needy" than they would have been without the special formulas provided in the Congressional Methodology. Also, some of the dislocated worker applicants had higher EFCs--and hence less need--as a result of the special formula treatments. For about half of most groups, the special formulas made no significant difference in their expected family contributions.

The winners--i.e., those for whom expected family contributions declined as a result of the special formulas provided for them in the Congressional Methodology--were usually the most affluent aid applicants in each category. The nature of the formula devices chosen by Congress to aid dislocated worker and displaced homemaker aid applicants could have produced only the results documented in this study. For example, the poorest aid applicants cannot be helped by the elimination of home equity from a need calculation if they are highly unlikely to have a home anyway. Only those with homes, who are more likely to have higher incomes, could benefit from such a formula device.

In fact, the pattern of formula changes adopted by Congress in the 1986 Amendments has quite consistently aided middle income aid applicants. Changes made to the Pell Grant Program formulas greatly expanded middle income eligibility for Pell Grants. These changes had the effects of increasing Pell Grant eligibility for the poorest Pell applicants by about $90 to $100, while aid applicants from twice such income levels received increased Pell Grant eligibility of as much as $1350 per year (Mortenson, 1988). Thus, the changes made to the Uniform Methodology when it was adopted by Congress are consistent with the changes made by Congress in the Pell Grant Program at the same time: they increase eligibility for financial aid for more affluent aid applicants while benefiting very little the poorest among aid applicants.

Finally, one must ask if the special problems of dislocated worker and displaced homemaker aid applicants can or should be addressed in the manner chosen by Congress in the 1986 Amendments. While such cases present special challenges to financial aid, many other special challenges exist that were not selected for special treatment by Congress. To have done so would have added complexity to an aid application process Congress has wanted to simplify.

There are clear trade-offs when deciding how to design a financial aid delivery system. An application system that seeks to address many special circumstances will inevitably be complex. On the other hand, a system that ignores the special circumstances of applicants that the dislocated worker and displaced homemaker formulas try to address cannot ensure the equity of opportunity that is the foundation of needs tested financial aid. Hence, simplicity may be purchased at the price of fairness.

In the past, Congress has addressed this trade off by a mixture of large, formula-driven foundation aid programs, supplemented with assistance to campuses to fill in the cracks that general purpose programs could not address effectively and efficiently. The reliance on campus aid programs, administered by trained professionals, to find and fill in these cracks provides a tested means of achieving the equal opportunity goals of financial aid. This alternative should not be abandoned.

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ACT

August 1988

Dear Financial Aid Applicant:

Earlier this year, you submitted a Family Financial Statement (FFS) to ACT as a first step in your application for financial aid for the 1988-89 academic year. ACT is now conducting a study of financial aid applicants, and you can help us improve the application process by answering a few questions.

The enclosed survey asks about some aspects of your family's employment status. Your responses to these questions will be combined with those of other participants to describe the employment status of some groups of aid applicants. Your input is critical to this study, and we hope that you will take advantage of this opportunity to help design a streamlined application procedure. Our experience indicates that it will take you about five minutes to complete the questionnaire, and return it in the postage-paid envelope.

The information that you provide will be kept strictly confidential. Only summaries of this data averaged over groups will be reported. The identification number on your questionnaire will be used only to record that your questionnaire has been returned.

Your participation in this study will be very easy, yet will help us to improve the financial aid application process. A free pencil has been included for you to use in filling out this questionnaire, so please take a few minutes to complete and return the enclosed questionnaire. We sincerely appreciate your cooperation.

Sincerely,

Thomas G. Mortenson
Senior Research Associate

2201 North Dodge Street, P.O. Box 168
Iowa City, Iowa 52243
(319) 337-1000

ACT

September 1988

Dear Financial Aid Applicant:

A few weeks ago we mailed you a survey with a postage paid envelope. Our records indicate that we have not yet received a reply from you.

Because you were carefully selected to represent the responses of many other financial aid applicants who are in circumstances similar to yours, your input is critical to this study. We are sending you another copy of the survey and another postage-paid envelope. Please take five minutes to fill out and return this survey. The information you provide will be kept strictly confidential and your response will help us to improve the financial aid process.

We sincerely appreciate your cooperation.

Sincerely,

Thomas

Thomas G. Mortenson
Senior Research Associate

TGM:jad

2201 North Dodge Street, P.O. Box 168
Iowa City, Iowa 52243
(319) 337-1000

A

FINANCIAL AID APPLICANT SURVEY

	YES	NO
1. Have you been laid-off or terminated from a job?	☐	☐
2. Have you been laid-off as a result of the permanent closure of a plant or other facility?	☐	☐
3. Were you self-employed but are now unemployed due to poor economic conditions or a natural disaster?	☐	☐

If you answered "yes" to any of the above questions, please answer the following questions. If you answered "no" to all three questions, then go to Question 4 below.

a. When did you become unemployed? ___/___ (mo yr)

	YES	NO
b. Have you been classified as a dislocated worker by some state agency, such as the State Employment Agency or Job Service?	☐	☐

c. If so, when? ___/___ (mo yr)

d. If so, name of agency? ____________________

	YES	NO
4. Has your spouse been terminated or laid-off from a job?	☐	☐
5. Has your spouse been laid-off as the result of a permanent closure of a plant or other facility?	☐	☐
6. Was your spouse self-employed but now unemployed due to poor economic conditions or a natural disaster?	☐	☐

If you answered "yes" to question 4, 5 or 6, please answer the following questions. If you answered "no" to all three questions, then please put this questionnaire in the enclosed envelope and mail it.

a. When did your spouse become unemployed? ___/___ (mo yr)

	YES	NO
b. Has your spouse been classified as a dislocated worker by some state agency, such as the State Employment Agency or Job Service?	☐	☐

c. If so, when? ___/___ (mo yr)

d. If so, name of agency? ____________________

Thank you for completing this questionnaire. Please return it to ACT in the enclosed envelope. Do not send any other documents, but you may use the reverse side of this questionnaire to add any comments you may choose to share.

FORM A - INDEPENDENT DISLOCATED WORKERS

Comments

Male - Crystal, MN

I was laid off from my job at Litton Microwave Cooking due to their relocation to Memphis, Tennessee. I diligently seeked employment for a one year time period during and after lay-off. Due to the poor business climate in Minnesota, I was only able to get two interviews and no offers in that period of time.

Since manufacturing was so slow, I decided to retrain in the trades (HVAC specifically) hoping to become more employable. Thanks for your support.

Female - Minneapolis, MN

In 1983 I was fired from a position at a trade publisher in New York City. The reasons was the convergence of two diseases: alcoholism and mania (manic depression). Although I asked for treatment my boss thought there was nothing wrong with me. In his view it's normal to hallucinate, lose 20 pounds in a week, not connect sentences and drink a quart a day. I was never really unemployed, always managing to find some work and preferring that to the ignorant and malintentioned ministrations of a society that doesn't have any comprehension of these illnesses. On my own I figured out the origin, what was happening, got off booze (genetic in my case) and on lithium--which calmed the neurotransmissions. My family helped. It cost $30,000 but I am now fully employed in writing/publishing and more stable than most people. Am planning to get other degrees for back-up only.

Male - Bozeman, MT

I have been in construction for 12 years. During the last 3 years, it has become progressively more difficult to maintain year round employment. The last two years I have had 4 months of steady work, my longest period of employment. The rest of that time has been sporadic, or taking any work to survive. The future Montana construction scene looks no better. Thank you.

Male - Snyder, TX

I am a student at Texas State Technical Institute for Rehabilitation as a result of two prison terms served, and I felt that in order to keep from returning to prison, further education and training was needed. Since I am only receiving minimal assistance ($230 for tuition and fees) from the Texas Rehabilitation Commission, and am paying the rest of my cost from a $448 per month social security check, I felt a need to call on other sources for assistance.

Comments

Female - Dubuque, IA

I was an LPN with 25 years of working full time. Approximately 2 years ago I had to change to an nurses aid in order to keep a job at the General Hospital I was working at. I am only getting part time hours, am my own support, and trying to go to school to get my RN so as I can continue to do the work I have chosen to do with my life.

Male - Dubuque, IA

I have only had one problem with receiving financial aid. In January of 1987 I applied for financial aid to go to Northeast Iowa Technical Institute for the machinist course. At the time, I was living with my father whose finances were too much for me to receive any financial aid.

In March I got married and my living status changed drastically. I moved from my father's and had to pay for my own schooling even though I could not afford it. (I eventually got help through J.T.P.A.) I told the financial aid office at N.I.T.I. what my situation was and they told me that you couldn't change the application except a change of address.

Why can't a person change their application if their financial situation changes for the worse. If I had gotten financial aid, and then won the lottery, I'm sure you would have stopped my financial aid.

Please answer my question (I answered yours).

Male - Champaign, IL

I was injured at work while employed as an electrician. The injury prevents my returning to work as electrician and I must retrain for a sedentary job.

Male - Milwaukee - WI

I was injured at work, as a result have not been accepted or able to return to the work force, so am pursuing a new career, through schooling I hope I can obtain new skills to help obtain a new career.

Female - Fort Payne, AL

I would like to say that I'm very disappointed I was given an 88-89 paper to fill out and did not know that until it was already to late. I wanted to file on 87-88 school year. I was barely able to work not getting very much and my husband and I just got married in 11-87 and he had been laid off of work a lot. I really need the help that I could

Comments

(cont.) have got to go to school on and I could really use it. I only wanted to file on 87-88 because 88-89 I hope would be better but I now have a hard time getting aid and could really use it. If you could all possible check into my files for me and check and see how I may get the files that I filled out on 88-89 put on 87-88 so I might get help. I would really like to stay in school if at all possible. P.S. I was not notified until past date that I had filed on wrong papers.

Female - Petal, MS

Spouse received a back injury on his job offshore. The company he worked for refused to let him work because of his restrictions on his back.

Male - Baton Rouge, LA

ACT does a great job in processing my paperwork. Many times people just don't think of the amount of time and devotion ACT gives to process several hundred-thousand applications yearly. So, THANKS, for a job well done!

Male - Ames, IA

I was a self-employed farmer for over 20 years. In early 1986 it became difficult to get financing for another year of farming and it was obvious that it would be improbable to expect my personal situation to improve. Therefore, I left farming in early 1986. My wife was also involved in the farm and therefore I wasn't sure how to answer some questions.

I'm looking forward to obtaining a degree in electrical engineering and appreciate the financial help I've received. It is very important to me!

Female - Sioux City, IA

At the time I filled out the ACT form I was legally in divorce proceedings. The divorce still has not been finalized. I do not meet your classification to be able to answer any questions after number three. Thank you.

Female - Edgewater, FL

When I married my husband--I was forced to leave my job due to a Nepitism Ordinance.

Male - Tupelo, MS

An individual should not be denied an education due to financial hardships. I made "too much money last year to be eligible for a loan." I don't keep the kind of cash around to pay for school!

Comments

Female - Broken Arrow, OK

This dislocated worker question has been difficult from the beginning & frustrating along the way. We give financial info for '87--do you mean the question for that year or presently.

My district office (Kathy's) was closed 4-15-87 & I was laid off for over 7 months. I am presently employed.

My husband--Dan--was laid off in 5-84, reemployed Aug 84, injured 04-85. After 2 surgeries he was released to go back to (6-86) work (with limitations). His old boss had terminated him 6 months after injury. Also he would not rehire him. There was no employment benefits available at this time. After much encouragement & conquering a lot of fear he entered TJC this summer with 1 course--to test the water, so to speak. Meanwhile the work comp people paid a private rehab service to test and place Dan. They test him--changed counselors--lost him--found him & almost immediately ran out of time. (?) State rehab talked with him but never helped. Heaven help us! We just want to find a new place in life & feel education is the way to do it. Filling out the Fin. Aid Pkg is worse than IRS forms & subsequent visits are more disparaging with TJC Fin. Aid counseling centers.

In May I took my papers, my husbands & my son's & was complimented for the completeness & throughness & quoted amounts of fin. aid. This proved to not be true (my mistakes & theirs and this D. worker question). Anyway I checked in July to see why I had not heard anything & found a mess!

The changes delayed us til my husband and I do not get awarded an OTAG.

Anyway, you probably don't care about half of this but we are fussy & that & wanting to vent my frustration (trying not to I guess) is why this is so late.

Female - Donna, TX

It's kind of hard to answer questions about a spouse when you don't have one. Maybe you should word the questions differently or put another box to correctly answer the questions. Thank you.

Comments

Male - Douglassville, TX

When notice is sent, you should inform applicant if income from previous year will completely disqualify applicant. I made $18,000 in previous year and can claim only one dependent. I was denied all forms of aid, grants, and loans due to this alone. If I had known that this amount would disqualify me, I would not have wasted niether the schools time nor mine.

Also, your wording and explanation of the question concerning dislocated worker status, led me to give an incorrect answer. I was then forced to submit a correction paper that cost me more money.

Female - Gary, SD

I am no longer unemployed & have full-time work & decided not to go to school as I still had to have a full time job to support myself as the loans & grant did not cover so could not afford to go school and have not accepted any grants or loans. Please remove my name.

Male - Grand Forks, ND

My wife did not fit into a yes answer in 4, 5, or 6 but she is considered a dislocated worker. Because, we moved so she and I could attend school. She was declared a Dislocated Worker the same time I was.

B

FINANCIAL AID APPLICANT SURVEY

	YES	NO
1. Are you or your spouse a homemaker providing unpaid services to family members?	☐	☐
If yes, answer questions a, b and c:		
a. For how many years have you or your spouse been a homemaker? ________ years		
b. Have you or your spouse held a job while being a homemaker?	☐	☐
c. If so, when was the homemaker's last employment? ___/___ (mo / yr)		
2. Have you or your spouse been dependent on public assistance?	☐	☐
a. If so, when did you last receive the public assistance? ___/___ (mo / yr)		
b. What type of public assistance? ____________		
3. Have you or your spouse been dependent on the income of another family member and are no longer receiving that income?	☐	☐
a. If so, what is the relationship of that family member to you? ____________		
b. When did that person last provide income for your support? ___/___ (mo / yr)		
4. Are you or your spouse receiving public assistance for dependent children in your home?	☐	☐
5. Are you or your spouse unemployed? (Unemployed means not working this week but being available for work and having made specific efforts to get a job sometime during the last four weeks.)	☐	☐
6. Are you or your spouse underemployed? (Underemployed means working part-time, even though full-time employment is desired, because work is slack or because only part-time work is available.)	☐	☐

Thank you for completing this questionnaire. Please return it to ACT in the enclosed envelope. Do not send any other documents, but you may use the reverse side of this questionnaire to add any comments you may choose to share.

FORM B - INDEPENDENT DISCLOSED HOMEMAKERS

Comments

Female - Spirit Lake, IA

My husband and I separated 1-88. I am now a single parent of 4 children.

Female - St. Louis, MO

It is my desire to acquire the type of employment that I can do at home. The reason being, I can be home to get my three year old from pre-school after the half day in attendance. I would also like to work at home to discourage neighborhood children from coming around to start trouble when they learn I am not home.

Female - Denver, CO

I'm alone with my boys and going to school.

Female - St. Peter, MN

We have 4 children and we're in our late 30's. We were farming until the poor farm economy wiped out everything we owned. We tried working outside the home, but could only find menial employment. While working full-time we decided to both go back to school full-time. Tough to accept public assistance, but will only need it for 10 months while we complete our degrees. Career change through education will give us a better chance in life.

Female - Wakeeney, KS

I am a single parent, not working while I attend school. During the 24 year period I was a homemaker, I worked off/on for approximately two years. My last job was during the period of Sept. 1984 to Sept. 1986, I quit that job to continue my schooling full time. I found it very difficult to be a single parent, work full time, and take classes on my lunch hour or at night.

Female - Claremore, OK

I'm a divorced housewife with four children to support and have no job skills and no child support. It would help if financial aid could be processed and received sooner than six weeks into the school year. I appreciate the aid--without it I would not be able to attend school, to get the skills needed to support my family in the future.

Comments

Female - Hugo, OK

I am not unemployed due to the fact I am not seeking employment at this time. My social worker and I have decided the best plans for me are to further my education. I am 19 years old, separated and have three children to support. I feel that without experience and education my chances at getting a job that will pay well enough to support three children, the child I am expecting and myself, are extremely poor.

Female - Millsboro, DE

After farm values dropped in the mid-80's I started school; my husband started a gravel business on our farm. The gravel business went under 6-30-88. My husband recently got a construction job which takes him far from home.

The children are with me at school for the duration and have been since 1985 when I started. Previously (the past two years) that fact was taken into consideration when I applied for financial assistance. This year I have been told that is no longer done and aid is considered on a per individual basis. Why? When I called the congressman for our district, I was told to make sacrifices! I'm all for cutting consumer spending but where does one sacrifice when your income for 1987 was $-38,000.00? Should I give my children up to foster care in order to get an education to provide for their living? What a vicious circle! My GPA is currently 3.528 overall and I received a Fuchsman scholarship ($250.00) for outstanding sophomore in Environ. Studies. Then my award letter arrives and I've been cut $2,000.00! What a joke!

Female - Boonville, MD

My husband is in prison. I thought going to college would help the future be more secure. But even with a grant, because of child care, rent, commuting (gasoline) I just couldn't see stressing myself out by doing so right now.

Female - Fort Collins, CO

I have been at home with children (3) for 8 years. We have moved to Ft. Collins so that we both can get M.A.'s. We are finding decent, well-paying work almost impossible to get. I have just found a 1/2 time typist job & my husband is "on-call" as a nurse's aide. He works 1-1/2 hrs away & sleeps in the car, coming home on weekends. We need help!

Female - Baltimore, MD

I have been enrolled in C.C.B. for 5 semesters and am about to enter the 6th. I have been on Public Assistance all the time, between P.A. and C.W.S. (for work experience) is how I make ends meet.

Comments

Female - Chicago, IL

Pay is not sufficient to support rent-food-household. Public aid will cut off working people even part-time work study. It helps while in school but comes far short of pay bills in single-parent homes.

Female - Waterloo, IA

Since Feb. 88 my husband got killed. I am a widow. I get Soc. Sec. now. Why can't I get the medical card? My children do. On what I get for Soc. Sec. I need the medical card and more food stamps.

Female - Rockford, AL

As a displaced housewife, who after 23 years as a homemaker find myself divorced with no educational skills, I am struggling for an education. The ACT aid is helpful. However I do not understand the 3% Guarantee Fee or the 5% Origination fee. Thats 8% taken before I receive the check. Also the estimated date of disbursement is 08/01/88 & 12/27/88 yet the University of Monterallo will not let me have the check until after school starts. I need the money for car gas, rent, electric bills & especially books & food. Since I'm the one getting the loan I don't understand why the University can hold the check. If the 8% off the top fees go to U. of M. why can't I get the check directly from the bank?

Female - Lafayette, LA

Thank you for your assistance in giving me the opportunity to return to college.

Female - Lawton, OK

I applied for help in going to school. I was turned down.

Female - Watonga, OK

I am twice divorced, with one child from each marriage. Neither ex-husband pays child support responsibly. I have received $300.00 from each one this year, the amount should have been $2320.00 total this year. Neither help take physical care of their children either. I am completely relying on grants and student loans for financial support.

Male - Hewitt, TX

I feel that the financial aid program is great! I had wanted to return to school and complete my education for years. I just didn't think that it was financially possible. It was very rewarding to find out that there is a way to obtain my degree.

(cont.)

The main problem is that the majority of people are not aware that the financial aid is available. I wasn't aware until May '88. We have told a lot of our friends about the programs available to continue your education and they had a positive reaction.

Female - Westboro, MO

I was first married 1/70. Divorced 10/73. One child--Wade. Remarried 3/77; widowed 4/77 massive myocardial infarction. Farmed 5 years with husband previous to marriage--(only employment since 1st marriage). Remarried 2/78--widowed 11/84. Wade adopted by father of Laura, Ben & Valerie. Husband died from accident on the job. Cohabitation with father of 5th child. No child support. Attend counseling sessions weekly & Alanon family group. Family is supported by Workmens Comp & Social Security checks. I will use my college education to get a job which will enable me to raise my family and improve our quality of life. Thank you for helping to make a 20 yr. old dream come true.

Female - St. Louis, MO

As a female I was not encouraged to attend school and plan for a career. In fact I was forced to live at home until I married. After marriage I worked all my married life hoping to be a full time housewife at some point. After the divorce I have been struggling to support two sons and put them through school hoping to do so myself later. Now those funds are no longer available to me and I have not completed the education I hope to get for myself. Its a very discouraging situation.

Female - Osceola, IA

I want to go to school so I can become independent financially.

Female - St. Louis, MO

Employed by St. Louis Community College at Meramec through work/study program part time. I work fifteen hours per week. Thank you for the pencil, and I am glad I could help in your survey.

Female - Greenville, MO

I am a 26 year old female. My husband has been totally disabled since 1982 after having a severe heart attack. I am now attending college so I can obtain training needed in order to secure a job so I can support my family and if possible get off the public assistance. We also receive Disability Social Security.

Comments

Female - Sturgis, SD

We receive child support, housing & energy assistance. No AFDC or food stamps. If you've been in school over 2 yrs, you aren't eligible for AFDC, etc.

We have extremely high medical and drug bills every month. One son has a rare bone disease.

Female - Twin Lakes, CO

I am a single mother of 3 children under 6 years. The father of these children left us last summer and later divorced me. He does send child support. Not willing to be on public assistance, Financial Aid enabling me to go to school is vital to my family's future. Thanks!

Female - Oakley, KS

Having no big income--and at times none at all, I was unable to get financial help to go to school. Very disappointed.

Female - Broomfield, CO

I apologize for not sending my tax forms in ASAP. By doing so, it delayed getting my Pel Grant approved. I hope I'm still able to receive one for full time schooling at Front Range. I went ahead and borrowed money from a friend for the tuition fees. I will pay it back as soon as the Pell Grant comes through.

Female - Virden, NM

Thank you for the pencil and the Pell I received 1986-1989.

Female - Milwaukee, WI

I'm a full time nursing student. Question #6 should have a section for F.T. students who only have the time to work part time because of studies.

Female - Gainesville, TX

I really wasn't sure what you wanted. I go to school & take care of my 4-1/2 year old twins. My oldest child is 23 yrs old. I worked & took care of her many years (also, my 16 yr old--who does not live with me at present time.

My mother paid my rent until I got on the housing authority this yr. June, 1988. Until I had my twins in '84 I worked & supported my other children as a single parent.

I receive AFDC on my twins & food stamps & Medicaid & the Pell Grants I get from you. Texas Rehabilitation pays for books & tuition--I am a recovering alcoholic & drug addict. I have no spouse & haven't for many years.

Comments

Female - Fayetteville, NC
I'm a divorced mother of two children. Life is tough! So am i. We're gonna make it.

Female - Oklahoma City, OK
I am a divorced parent of two. Presently recieving state assistance.

Male - Altoona, WI
I didn't receive that other quistionar.

Female - Grenada, MS
I am a single parent of two daughters and recieving no child support most of the time. There seems to be no finical aid to help with shelter, and other everyday living expenses. I went to school last year on Pell grants and working part-time. During this year my parents were taking care of my daughters completely.

It would make things easier if there was more aid for myself. Thanks for giving me the chance to express my feelings.

Female - Littlerock, AR
Do you help with living expensive or cloths

Female - Osceola, IA
On underemployed--37-1/2 hours a week at just a little over minimum wage is still underemployed, I think.

Female - Sioux City, IA
I'm a full time LPN student and have only been able to return to school because I have recieved financial aid to do so.

Female - Marble Hill, MO
I would like to know specifically what this survey is for. I do not understand why it was so emportant for me to fill this survey out.

Female - Concordia, KS
I am a divorced mother of one, who is going through school, trying to better myself. This is in order to earn an adequate living for my son and myself. During this time I am working part time on the weekends.

Comments

Female - Milwaukee, WI

At present I am a single motherof a seven-year old (born 1981). In 1983 I began making serious efforts to get off welfare and work for a living but only found minimum-wage work. My confidence was low, feeling like a failure for being unmarried and for accepting assistance. Always having been proud to be a working person, and now working for anliveable wage, I could not face myself in the stiuation in which I found myself, and went back on AFDC.

In September of 1985 I return to UWM to become a teacher, as I felt it was a way to have the same hours and holidays as my child. In February of 1986 I began student work at the UWM Map Libarary (1 1/2 years) also Title XX came through and assumed payment of child care. Also I fell in love with Geography. Since then I have spent a year doing student work at Great Lakes Research Facility and have learned greatly while working and being paid $4.00 an hour.

At present I am in graduate school in Geography (first semester!) and finally have a "real job" in the outside world at AAA for $5.50 an hour. Still on AFDC, but supplementing it.

My point is: Federal Grants for Education, as well as Title XX for child care, are money much better spent than the perpetuation of the stagnation and frustration of AFDC. People are uninformed about the opportunities

Also: Once one stops working, it's hard to get back into the cold world. I needed to be taken by the hand and sheltered (University jobs) in work-study till I felt I could face the world again. We do need help more than we need welfare.

Female - Rudolph, WI

Concerning questions 5 & 6: I am a student and a single parent. My enrollment status is full time. I could not also be employed.

C

FINANCIAL AID APPLICANT SURVEY

YES NO

1. Have you been terminated or laid-off from a job? ☐ ☐

2. Have you been laid-off as a result of the permanent closure of a plant or other facility? ☐ ☐

3. Were you self-employed but are now unemployed due to poor economic conditions or a natural disaster? ☐ ☐

If you answered "yes" to any of the above questions, please answer the following questions. If you answered "no", then go to Question 4 below.

a. When did this person become unemployed? ___/___
mo yr

b. Has this person been classified as a dislocated worker by some state agency, such as the State Employment Agency or Job Service? ☐ ☐

c. If so, when? ___/___
mo yr

d. If so, name of agency? ____________________

4. Has your spouse been terminated or laid-off from a job? ☐ ☐

5. Has your spouse been laid-off as the result of a permanent closure of a plant or other facility? ☐ ☐

6. Was your spouse self-employed but now unemployed due to poor economic conditions or a natural disaster? ☐ ☐

If you answered "yes" to Question 4, 5 or 6, please answer the following questions. If you answered "no" to all three questions, then please put this questionnaire in the enclosed envelope and mail it.

a. When did your spouse become unemployed? ___/___
mo yr

b. Has your spouse been classified as a dislocated worker by some state agency, such as the State Employment Agency or Job Service? ☐ ☐

c. If so, when? ___/___
mo yr

d. If so, name of agency? ____________________

Thank you for completing this questionnaire. Please return it to ACT in the enclosed envelope. Do not send any other documents, but you may use the reverse side of this questionnaire to add any comments you may choose to share.

FORM C - DEPENDENT: DISLOCATED WORKERS PARENTS

Comments

Male - Tulsa, OK

I am currently enrolled in the University of Oklahoma Continuing Education and Public Service fall semester with tuition and fees covered by the Dislocated Worker Program at Tulsa Vo-Tech School District 18.

Female - Colon, MI

My wife no longer receives unemployment, but has a part time job earning approximately $100 wkly. I just started work the week of Sept. 1, 1988 and will receive $200 weekly.

We also had to take a mortgage on our home for $14,000 to help pay for back bills and money owed, and to help pay for our daughter's education expenses, and my grandson's medical expenses which have occurred recently. We have no medical insurance.

Male - Ottawa, IL

At the time I submitted Family Financial Statement, I was classified as a dislocated worker going to college. Since then I have been hired for another job.

Female - St. Louis, MO

The form is too long! It seems as if the same questions are being asked more than once.

It also takes up too much time to fill in little circles after you've written everything down. I understand that this might be done so that the computer can read them, but why both to make us write it down as well. Only one method should be used, not both!

Female - Metairie, LA

Sustained back injury in March 1987 while on the job. Collecting Workman's Comp. Also now attending college to be retrained in another field of work.

Male - Centralia, IL

I do not know the meaning of dislocated worker. I doubt if I have been classified as a dislocated worker by the Illinois Employment Agency since my work is construction.

Male - Lakewood, WI

There should be a space on other forms to enter retired.

Female - Superior, WI

I was laid off from Electro Craft in Amery, WI because of plant closing. My husband was hired at Kroy in Oscela, WI on a temporary basis.

Comments

Female - Minot, ND

The year that the company I worked for was sold, the new corporate parent organization cut the entire department I worked in; layed me off for six months and then called me back. When I moved our daughter to college, I personally went to the Financial Aids Officer to explain this. He was sympathetic, but there was nothing he could do he said to help our daughter.

I feel that there should be someway to change the circumstances of financial aid when the family circumstances change so drastically from the time of filing to the beginning of school. A lot can happen in six months, as I have found out in the last two years. We used to file out income tax on five-year averages because it was so different every year. Only people with union pay checks get regular wages and raises.

This year the big difference is my husband not working. He has spent half of the year on long tours for the military reserves for the last six years, and that was the base of our income. This year he did not go on any tours because of the federal budget cuts.

I think a special fund should be set aside for the students when their families have these unannounced, and swift changes in the income they use to support the family. We no longer have a savings, for instance. We are living on my pay check, and whatever my husband can get for spot jobs, such as when he helped the carnival at the state fair set up one day. Yet financial aid for our daughter is based on last year's income when this year's reality is much less income.

Our daughter is ambitious enough that she has been trying to work too; last spring she also ended up with Mono - and that meant she either had to drop out, or have her schedule cut back to the minimum for a full time student. Now she has been working two jobs this summer, over 50 hours a week at about minimum wage to hope she has the funds to go to school this year - her junior year. We are barely making it, so our ability to help her is going to be very little.

Female - Atlanta, TX

The forms were much too difficult to fill out. It took us approximately 4 hrs to complete them in one sitting.

Male - Springville, AL

I did not get laid off but I had to take a personal leave. I'm not working.

Comments

Male - Jasper, AL

I was terminated Dec. 9, 1987 at a job that I had been working at for 22-1/2 years. I got another job June 6, 1987. In which at this job I'm making a considerable less amount of money.

Female - Pampa, TX

I am now employed by Warner-Horton Supply as a warehousemen and deliverymen. My pay is $5.50 per hour, and I work 40 hrs per week.

Female - Eagle Bend, MN

Gary works construction so laid-off comes anytime there's no work or when freezing starts.

Job Services of Alexandria, MN doesn't classified Gary as a dislocated worker.

Male - Alexandria, MN

I am an 18 yr old who has graduated from high school and will be going directly into Vo-Tech. I have not had a full time job. My father was a farmer who lost his farm due to the poor economic conditions in that field. He is working on a farm as part time farm labor.

Male - Marcus, IA

I am a displaced homemaker due to loss of a family farm. At 45 years, I am a full-time student at a private college and this is only possible through the help of ACT and financial aid personnel. My sons are freshmen and sophmore students in college. The number of family members enrolled in college should be retained as a point for determining financial aid.

Male - Lamar, CO

Questions answered for an unmarried student to whom the questionnaire was addressed. In this instance if the same questions were asked of the parent answers would have been YES. You inquired only of student and student spouse.

Male - Britt, IA

I am a single mother with 5 children. I lost my job in Canada because of pregnancy & complications. I brought my family back to the U.S. for a better education, and thanks to you my eldest will be able to attend college. My gratitude and heartfelt thanks.

Comments

Female - Aneta, ND

I was a displaced farmer the spring of 1988, and found temporary employment through the summer but will become unemployed in the fall of 1988.

Female - New Berlin, WI

We have three (3) daughters enrolled in college full time at three different schools. Each school has its own requirements for financial aid. They register and enroll in classes in advance.

Then we wait and wait for a response regarding financial aid. Why is it such a long process? I would like to know in advance what information is required.

All pertinent information could be submitted at one time and reviewed by the financial aid committee.

Female - Sussex, WI

Father of applicant was terminated from his employment due to phasing out of job/department.

Female - Steele, AL

I am 68 years old and have a serious lung problyms. I stay on oxygen 24 hr a day. I have been on disability for several years now. I am still on Social Security and not able to work.

Female - Bessemer, AL

I have the bills and everything to pay and I will have to get a grant because this not enough money for college.

Female - Brownsville, TX

I am 62. I get S.S. payment of $302.00 a mo. My wife makes $6000.00 a year. I was born 6-12-26. My dauther needs financial aid.

Female - Iowa Falls, IA

I did receive unemployment checks, however I had been DW as of 7/88.

Female - Albany, GA

My husband was terminated when the Firestone plant closed here in Albany. He is now self employed.

Comments

Male - Bayonet Point, FL

The reason I have not answered your questionaire before is as in all forms it does not show a true picture of a situation and we don't know exact dates.

My husband was classified disabled in I believe 1977 and has not been able to work since. I went to work as I had 4 school age children living at home. CETA send me for retraining. In 1984 the place I was employed at for 6 years went out of business due to lack of business.

I found another job (Big C) also in the Insurance business & they went into receivership & finally bankrupt.

After 8 years in the Insurance Field as an underwriter-claims representative & secretary I was out of work for 10 months. I have recently taken a position as a secretary-receptionist for about 400 amonth less than I was making out of desparation. In addition my 25 year old daughter has returned home because she could not survive & decided to go to college. She starts Oct 12 at PCTI with help from the Private Industry Council. She can not work.

We have not 1¢ in the bank drive an old car & survive to the best of our ability. Yes the bank lets us live in our home from a month to month basis as long as we pay the mortgage. I am 52 my husband 54 and owe out more than I care to think about.

I hope this information helps in some way.

Female - Detroit, MI

Was laid off in Mar 1980, have since been call back to work. Did not answer question about spouse, I am Div.

Female - Lake LeeLanau, MI

Wife is presently unemployed due to husband's relocation.

Russellville, TN

I did return the other survey but it was badly torn in the mailing to me so the identification may have been torn up.

Female - Huntsville, AL

My spouse is not employed--she is a homemaker--(housewife).

Female - Tuscaloosa, AL

My husband plant shut down 2-1-88. He has been unemployed until 9-19-88. 7-1/2 months out of work.

Comments

Female - Lubbock, TX

Due to an accident I have not worked for 2-1/2 years. My spouse is in El Salvador and I do not know when he is comming back. With out financial aid my daughter cannot afford college.

Female - Mission, TX

I was laid off in 1987 due to permenant closure of company. I was unemployed for about 9 months. Worked part time for 3 months. Out of work for 3 months. Now working full time.

I didn't know from what time you were talking about. Hope this helps. Also I'm divorced and a single parent.

Female - Texarkana, AR

I am presently attending college at Texarkana Community College as a night student. I work full time; therefore I will not be going away to school for a while.

Female - Mission, TX

To Whom It May Concern: This is to let you know that I am unable to answer the questions of your survey. This is due to the nature of my present situation. To the best of my knowledge I have not been terminated or laid off from my job. At present my case is pending, a decision by the court (filed suite) due to an injury I received at work and therefore I have not worked since Dec., 1986. As for my husband, he is retired from the U.S. Army.

Female - Fairbault, MN

Three years ago, we went through a farm foreclosure. Since that time my husband has worked for a food processing plant. However, that is a seasonal job--usually starts in April and goes through Sept.

Lack of formal training, employment area and age has made it very hard to find full-time employment.

Male - Hannibal, MO

My husband was laid off for almost 2 yrs. this time, previous to that he worked 6 mos. & was laid off 1 yr. I'm not sure of the exact dates. He has 22 yrs. with the Company, he is now first on the list to be called back.

Comments

Female - Urich, MO

My husband & I were both laid off the same month. I worked at a small agricultural town bank. My husband--at a business with new owners and management trying to cut costs by laying off all long term employees. We were laid off because of economic conditions but since we were not laid off in a group I guess we were not classed as displaced workers. When a large business or factory is closed, the people get help in retraining & finding jobs. We were on our own! but we did find new jobs.

I feel financial aid is essential to families like ours. We have not received welfare or free lunches (although we were eligible most of the time) but have lived on our salaries. Now we need help to educate our children so they can find better jobs--thus--more than paying back any aid the recive.

Male - Bottineau, ND

Do not know whether spouse was classified as a dislocated worker. Her job was terminated at the insurance agency she worked at and since she could not find any other insurance work in our area she did draw benefits from Job Service North Dakota for 26 weeks.

Since that time she has now found part-time employment in another line of work.

Female - Midwest City, OK

Worked for I.T.S. Corp. 11-84 to 9-85 and was terminated worked temporary for Sequoyah BIDg till 6/86 for 2 or 3 months. In 5-10-88 to 9-9-88 was in a CWEB training program at the Okla. State Employment Services in OKC, where I helped with the work there, was not payed thru employment services, but thru welfare asst.

D

FINANCIAL AID APPLICANT SURVEY

	YES	NO
1. Are you or your spouse a homemaker providing unpaid services to family members?	☐	☐
If yes, answer questions a, b and c:		
a. For how many years have you been out of the labor force? ____________ years		
b. Have you held a job during your homemaking years?	☐	☐
c. If so, when was your last employment? ___/___ mo yr		
2. Have you or your spouse been dependent on public assistance?	☐	☐
a. If so, when did you last receive the public assistance? ___/___ mo yr		
3. Have you or your spouse been dependent on the income of another family member and are no longer receiving that income?	☐	☐
a. If so, what is the relationship of that family member to you? ______________________________		
b. When did that person last provide income for your support? ___/___ mo yr		
4. Are you or your spouse receiving public assistance for dependent children in your home?	☐	☐
5. Are you or your spouse unemployed? (Unemployed means not working this week but being available for work and having made specific efforts to get a job sometime during the last four weeks.)	☐	☐
6. Are you or your spouse underemployed? (Underemployed means working part-time, even though full-time employment is desired, because work is slack or because only part-time work is available.)	☐	☐

Thank you for completing this questionnaire. Please return it to ACT in the enclosed envelope. Do not send any other documents, but you may use the reverse side of this questionnaire to add any comments you may choose to share.

FORM D - DEPENDENTS: DISPLACED HOMEMAKERS PARENTS

Comments

Female - Kings Mountain, NC

I am a widow with a kidney transplant that I received in August 4, 1971. I have not had a permanent job sense, but I have had very small part time jobs. I do substitute teach when I am called to take a teachers place, now.

I am in favor of students recieving the Pell Grant for the simple reason, the money will be paid back to the Government many times over; with the extra taxes a college student will be able to pay; verses the amount a non college student will be able to pay in a life time.

Male - Milwaukee, WI

I don't really understand the survey, especially regarding the public assistance. I was cut off since last year, shortly after I have my real age corrected. My last grant was on July 87 because July 23 is my 18th birthdate.

Female - Corinth, MS

I draw my husband's Social Security. He was killed in 75, and I now draw for myself & son which is 13 years. My daughter will be cut off Oct. 2, 1988. She will be 18 years old and can no longer draw. She is in her first year college at North East Miss. This is a good thing for students that need help.

Male - Wagoner, OK

My son & I were drawing Social security off of my husband, who died eight years ago. Then after my son graduated he lost his Social Security check.

Male - Lodge Grass, MT

The Father of the Financial Aid Applicant is drawing Social Security Disability Payments for total disability.

The Mother of the Financial Aid Applicant is drawing Workman's Compensation Payments for partial disability.

Male - St. Bethlehem, TN

My daughter recieved a check from the S.S.A. until March '88 because her father was disabled. That check was discontinued when she graduated from high school. When we recieved that check, it was used to pay household bills.

Female - Atascosa, TX

I have been a housewife and mother to nine children for 36 years. My husband use to work for the civil service but has not been retired nine years. We rely on his retirement for financial support. We do have a small family ranch, but as so put more into it (financially) than receive from it.

Comments

Male - Pinellaspark, FL

In this family my husband has been ill for over 10 yrs and went on Social Security Disability at age 57 (in 1978) (he also has Air Force retirement). Our children are grown and I would like to work outside the home, but my husband requires 24 hour a day care, he now has Parkinsons Disease and mental problems and is unable to care for himself.

Male - Baxter, TN

When our oldest child was born I chose to stay home to raise our family. My husband is a Baptist pastor, currently going back to school to complete his Masters Degree. A pastors salary is rarely up to that of other professionals and from time to time I have had to suplement our income by part-time employment. I have enjoyed staying at home with my children. We may have missed some material things but our children are secure, happy, productive members of society.

Female - Atwood, IL

We both work for the Shraders Ambulance Service Atwood. We are only paid for ambulance runs to hospitals. It varies as to how many runs we have per day and per month.

Female - Polo, IL

I would sure appreciate any information regarding financial aid. Being a one income family, it doesn't seem like you take into consideration all the expense we have in raising three children. I know so many two income families who seem to receive much more help. It seems that there should be a fairer way to evaluate financial aid.

Female - Rushville, IL

Why are medical expenses not paid by insurance that must be paid plus premiums. My (our) income doesn't replace money set aside for retirement (and due to lower income it is definet it will be needed due to SS payments being lowered.

Is the fact that no other aid is availble considered. My daughter was an IL scholar but no money help will be due just a paper honor. Fed Grant are all that can be availble to us, so could or should that be considered in setting amounts of aid.

Could information be faster so parents and students would know amounts of grants. We as other parents need to know by the start of school the grant amount, so we can compute, if we can find money and the amount to provide the student's future.

We started paperwork in Febuary 1988 and as of Aug 30 1988, have no way of knowing if or what amount of grant we can expect. We paid a semester and if no word is past on about this grant (can our as other students continue.)

Female - Gladwin, MI

I am disabled from a car acident in 1980 and have been unable to find employment I am able to do for any reasonable amount of hours pr. day.

Female - Detroit, AL

I am answering this survey for my son.

The reason we ask for help is because, I am total disable, I worked for the Detroit Board of Education for 17-1/2 years and a part time job after the full time job. The financial report that we sent in was correct, I am not on aid, have never been on aid, and I pray to God I won't have to go on aid.

I am on disability Social Security and Retirement from the board. My son was getting Social Security but after he graduate out of high school they cut it off.

My reason for disability, I had a heart attack six yrs ago.

I am a very independent woman, and you can always make it if you try.

My son is in school and I'm going to do my best to keep him in until he finish.

Male - Smithville, TN

My husband became very sick at the time our boys needed his financial support. It is very sad to see children with a great desire to go to college. But because they are from poor family such as ours they are refused. Just remember that children today rich or poor are the leader of tomorrow. Eny help you are eny one can give. Please do so lest our children fall in to temptation. For when our children fall so will our country.

Comments

Female - Brokenbow, OK

We are a farm family. Due to the poor market for our farm products, and the high prices we have to pay for all the necessary things it takes to farm with, plus the high interest rates, it has put us in a very bad financial position.

As a mother I have never worked regularly outside the home.

Female - Fayetteville, AR

I am unable to work due to rheumatoid arthritis. My husband left in 1983 & has elected not to help our college age children in any way. Since I can't work they've had to provide their own schooling.

Female - Miami, OK

The head of household is disabled, and has been disabled since June 22, 1987. He receives $500.00 (a month) from Railroad Ret. Sickness Benefits, and no other benefits. Sandra receives $266.00 from Social Security, a month. Total family income a month is $766.00. James' disability is covered under FELA, and no payment will be made until after legal litigation. Law suit filed Feb of 1988, and is anticipated to be finalized 1st part of 1990.

Male - Houston, TX

I'm wondering is this helping me get in school, because I've feld out a lot of paper before, but they are being sent back to me, and I don't understand. Unfortuned I would love, so very much to attend Texas Southern University in the fall.

Male - San Benito, TX

Single parent mother of financial aid student answering questionaire. I feel personnel selected to distribute information on financial aid should be more qualified. At the last minute we realized we had to apply for student loan. This is a drain on emotions after trying to keep your head above water.

Female - Bunkie, LA

I not working. My husban recieve S.S. the amount of 419.00 pre-mont. We will live on that.

Comments

Female - Britt, MN

As of April 30, 1988 we have been supporting my mother and she is incapable of being left all alone so I couldn't afford to put her in a nursing home so I have her living in with us. She is another dependant of ours and our daughter is away at college so this worked out very nicely for my mother.

Richard was layed off of work for 2 years and we are just getting caught up with all of our bills after being on welfare for 2 years.

At the time we applied for the Act we were on welfare and we still are receiving some help yet but not that much. Our medical insurance will expire in Oct. but they had to keep us on that. That's all the help we are getting now.

I am disabled with Chronic Asthma so I cannot work anymore. I am on breathing medications.

So this is why I qualify to get assistance also. I'm hoping Linda will get her loan she needs to finish her last quarter in college. Please let me know if she does. We will await your prompt reply.

Female - Ballwin, MO

Questions on the FFS, or some question, are ambiguous. The form or system does not take into account normal debts. I know the government developes the formula used to determine those eligible for financial assistance. However, it is unrealistic. The application process requires more confidential information than buying a house. I did not want the loan, it was for my children. They needed this for their studies. They would be the ones to pay it back. The middle class familys are being descriminated against just because they are paying on a home. This is considered owning your home without determining how much belongs to the bank---

Male - Bridgeton, MO

Financial aid for students who come from a single parent home which is paid for does not take into account the cost to upkeep that home compared to renting a house or apt.

Female - Bolivar, MO

We are currently supporting ourselves and our dependents on the income we receive from our dairy farm. Needless to say, the depressed farm prices along with this year's drought are making this increasingly difficult. Therefore our two older children, our daughter-in-law, and myself, "the housewife," are presently attending college in hopes of eventually being able to supplement our farm income. Farmers are an independent lot and although it has "gone against the grain" to ask for any kind of assistance we are trying to pull ourselves up by our boot-straps. Actually, we are proud of the fact we have been able to "hang on" when we see what has happened to many of this nation's farmers. I did not intend a sermon, but sir if you count any farmers among your friends, pray for them, I assure you they need help.

Female - Vermillion, SD

I am a single parent and find providing for my children very difficult. I have at times held three jobs in order to take care of my children's needs--one full time, two part-time. All of these jobs did not meet my skill level. Choosing to pursue a M.A. and a Ph.D. while my children are in school was a very difficult decision. I still am plagued with fears of employment after Ph.D. for I'll be 50 years old.

Female - Sanford, FL

I'm not married, I just graduated from high school June 88. I'll still live with my parents who are both on disability. I look for part-time work to try & help but I want to go to school so I can make a life for myself, and let my parents be proud of me while they can.

Male - Bloomington, IL

Sorry this was late. My husband has been very, very sick, so I have been busy taking care of him. The reason we are on Public Assistance is because they keep denying my husband his social security disability. He has been unable to work for years.

Female - Montgomery, AL

I have been out of work for about a month now. My last job was at Prattville Appreal as a seemstrist. I am now in process of finding another job. As you can see i cant possible pay for my daughter education. I do thank God for these type of program, and hope that you'll be able to help my daughter.

Male - Alma, AR

We mailed one of these questionnaires before but we're mailing this again. It was stated that this was very private and no one would know who was answering the questions. How did you know our questionnaire was theone that didn't get back to you?

Comments

Male - Slidell, LA

Due to the decline of the oil and gas industry in Louisiana the tankerman referred to in Questions 1-3 has not had long term employment since 1981. There have been several short-term assignments along with attempts to find employment in other fields. However, lack of job training and health problems have resulted in a negative outlook for immediate change.

Male - Atlanta, GA

I gave my financial aid application and survey to the financial aid office in Valdosta State College, the month of August, 88.

Female - Waukegan, IL

To Whom It May Concern: You were right when you said that our situation is different when it come to applying for financial aid.

In March 1986 my husband was injury on his job since then he has not been able to work. He has had 3 operation on his shoulder and cannot use his arm. He is not able to work on a job or go out looking for work if he found it he is not able to work. He's having his 4th operation 10-6-88. His doctor don't know if he will be able to work again. I am employed. I make 9.60 hr. I do all the overtime I can it is not promise to me. That is why we applied for financial aid. Both my husband & me we have worked hard all our lives not asking for help and when we had to apply all we've gotten is a run around. I don't think this is fair. This is my feeling about this organizaqtion. If you need the help you don't get it. Thank you kindly for letting me express my self.

Female - Hawks, MI

I live with my parents and I have a handicap and have never be able to work. I cann't drive.

Female - Ettrick, WI

I am a paraplegic trying to establish a small business--existing on Soc. Sec. Disability--also a single parent.

Female - Winona, MS

(Written by daughter). My father is deceased as of Oct. 1983. My mother is disabled & has not worked in 10-12 years. In January 19, 1981, my mother became very ill with a cyst on her pancreas. The cyst ruptured & she almost died at 3 different times. She was hospitalized for 3 months in Jackson, MS. The cyst rupturing triggered her into diabetes, which has distroyed some of her nerves. This disease is called neropathy. She has not been given enough money to practically survive. My little brother lives with her, also.

I attend Mississippi State University full time & work as a student worker on wages. I can't work enough to pay for everything I need. I need to study more than I do, but can't because of work. I also need to be tutored. There is just not enough money for me & it's very hard for me to go to school & always has been. I'm very behind in my school, but I'm still trying. My mother & I sincerely hope we've helped your survey.

Female - Rolling Fork, MS

I am __________ mother. I am not work, I am not able to work much. If it was job I can do I will work. _____ works about 3 week before she went to Jackson St College.

Female - New Iberia, LA

Im retird, have been for 5 yrs, 62 years old. My wife is 59, she is a part time sitter with ill folks, whenever she is needed. Or some call her for that perpose.

Male - Shreveport, LA

I work as a maid taking care of an Altzheimer patience. I only make $100 dollars a week.

My sone and I are on the housing program. This is the only public assistance we receive.

Male - Edcough, TX

I do not understand what you mean by public assistance so I marked no. The only assistance I've been under is food stamps and welfare from the government. Right now I am not under those programs.

Female - McAllen, TX

To Whom It May Concern; this survey wasn't able to arrive earlier, because my mother became ill.

Female - Burnsville, MN

I just started (this week) an entry level probationary job after 15 mo. of searching & 24 years since full-time work. (Changes my responses)

Male - Farmington, MN

Some of us that fill out these forms are not as smart as those who write them--simplify!

Comments

Female - Hartington, KS

I feel there should be more assistance for the economically burdened farmer. The dislocated worker clause does nothing for the farmer if he has to have verification from job service because a farmer is self employed so is not eligible for any unemployment benefits thus Job Service does not provide any verification. We were told last year to check the box on the ACT form because we had filed bankruptcy, lost our land lease & my husband was unemployed for a time and all it did was hold up our application because it was sent back for verification from Job Service which they could not do so we spent valuable time redoing paper work. Either get rid of the dislocated worker thing or change it so it does some good.

Female - Lewistown, MT

These questions are hard to answer as my spouse and I operate a farm ranch operation. Due to low prices and lack of moisture our income this past years has been quite limited. 1986 we were reposessed by the Farm Credit System.

Our area this year has been hard hit by the drought. We hope that we won't have to ask for food assistance, ect., but it may have to come to it.

We have been at this operation for 25 years. It is tough to loose everything and have to start all over again.

Female - Ammon, ID

I am a single parent with 5 children. The youngest is 3; and my son (12) is Down Syndrome with heart defect; requiring my attention so that I am not able to work permantly. I am currently in school part-time so that I may get a job with enough income to provide adequately for all my children--My oldest daughter is also attending college and working part-time. I receive HFOC, etc.

Female - Denver, CO

This is a hard story to describe. I have supported my husband & 4 children for 28 years short maybe a couple of months. _____ is the youngest so as soon as she graduated from High School I felt my obligation to husband was over for family sake. I received the house & property during divorce proceedings but because he does not work, I & _____ have rented a apartment so he has a place to live. He lives with his mother (at my house) & she receives Social Security to take care of themselves. I do not receive any thing from that situation nor have I ever received any help for _____ schooling or anything for that matter. I have never received assistance! I work

Comments

Female - Royal Oak, MI

I am a single parent of two boys (ages 19 & 18) who are preesntly attending college. I was employed during the first 4-1/2 years of marriage (unitl 1970); then remained at home for 11 years, returning to work as a temporary (secretary) in Oct. 1981. After the divorce (Dec. 1983), I returned to work full-time and have been working as well as "providing unpaid services to family members" ever since.

Unfortunately, I am classified and paid as a "Records Cler" in spite of the fact that I work as an archivist in a corporate archives and have an M.S. degree from the University of Michigan (in Library Science). Shouldn't this situation, which happens to countless other women, be classified as "underemployed" or something similar?

Male - Freehold, NJ

I was a homemaker for 20 years and held only part-time jobs during the last 5 years of that time.

I presently have 2 jobs and work 7 days a wkk but both jobs are entry level and my combined gross pay is $14,500.

Male - Phoenix, AZ

I am an Independent 19 year old. I am self supporting and feel financial aid available is insufficient. Due to last years income, I have no choice but continue working full time while going to school full time. I was eligible for $750 in financial aid--which is a joke. I don't necessarily want grants, but self help assistance would be nice.

Female - Fayetteville, NC

I have 0 income and I am presently far the last 2 1/2 years been under the Doctor's care to find my physical cableabilities to go into the work force because of my back, I am a graduate in Business an Ars degree as of 1985. This is the reason for my 0 income. I am doing all I can to encourage my daughter which is a fr. to complete here 4 years even with the hardships she endures because of my low income. Thank you for considering me in your confidential survey.

Male - Mt. Pleasant, MI

Dear Sir: I am not Blake's parent, but, a grandparent, whom Blake has either lived with or near all his live. Blake has never known his own father. Blake has never known his own father. Blake is on his own now. The only help he gets is what we are able to help him.

Blake's grandfather passed away Sept. 16, 1988, so, all the help Blake gets is what I'll be able to give him, which won't be much, as I'm retired, living on social security.

ACT STUDENT FINANCIAL AID RESEARCH REPORTS

This report is the Fifth in the series of Student Financial Aid Research Reports published by the Research Division of The American College Testing Program. The reports in this series to date are the following:

Why Student Financial Aid? December, 1987. No. 87-1. Thomas G. Mortenson.

Pell Grant Program Changes and Their Effects on Applicant Eligibility, 1973-74 to 1988-89. May, 1988. No. 88-1. Thomas G. Mortenson.

Attitudes of Americans Toward Borrowing to Finance Educational Expenses, 1959-1983. November, 1988. No. 88-2. Thomas G. Mortenson.

Family Income, Children, and Student Financial Aid. April, 1989. No. 89-1. Thomas G. Mortenson.

Dislocated Workers and Displaced Homemakers. May, 1989. No. 89-2. Thomas G. Mortenson.

Copies of these reports are available in limited quantity by writing:
Educational and Social Research
The American College Testing Program
P.O. Box 168
Iowa City, Iowa 52243

Prior to the initiation of this series, ACT published research reports on student financial aid issues in its ACT Research Reports. These reports are now out of print, but may be found in many research libraries.

Family Income and the Characteristics of College-Bound Students. February, 1967. ACT Research Report No. 17. Leonard L. Baird.

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Missing College Attendance Costs: Opportunity, Financing, and Risk

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MISSING COLLEGE ATTENDANCE COSTS: OPPORTUNITY, FINANCING, AND RISK

Thomas G. Mortenson

SUMMARY

The investment theory of student demand for higher education holds that a potential college student will choose from among available options (college, employment, military service, crime, etc.) according to the highest net present value available to him or her from these options. The net value is the present value of the benefits minus the present value of the costs of each option under consideration by the individual. This paper examines how costs enter the potential college student's calculation of the benefits of college attendance. In particular, this paper considers how costs not considered in financial aid need analysis can increase college attendance costs and thereby decrease net benefits of college attendance for those who use financial aid to help pay college attendance costs.

The college budget recognized in financial aid need analysis is limited to direct and indirect costs of college attendance. Direct costs are costs of attending college (tuition, fees, books and supplies), and indirect costs are costs of living while attending college (food, housing, transportation, personal and medical care, etc.).

College budgets exclude three other costs faced by students while attending college, costs for which financial aid is not provided. Opportunity costs are the value of the opportunities sacrificed to be able to attend college, such as lost earnings from employment. Financing costs are the result of the conversion of student aid from grants to loans, and the resulting obligation of loan recipients to repay not only the student aid they received, but also loan processing fees and interest on the unpaid balance of that student aid. Risks, though not strictly costs, affect the perception of net benefits of college to prospective students as if they were. Loans impose risk costs on these borrowers who do not graduate from college and are hence less able to repay their loan obligations.

The paper then reviews the current status of higher educational equity for women, racial minorities, and low-income groups compared to their equity status over the last several decades. This period covers the period of the two major changes in student aid programs: enormous growth in student aid programs and funding, followed by the conversion of federal student financial aid from grant assistance to loans. The equity achieved during the 1970s for minorities and low-income groups has been eroded during the 1980s as the opportunity, financing, and risk costs of college attendance have increased.

The financial aid aspects of equity of higher educational opportunity are then reexamined in terms of opportunity, financing, and risk costs not considered in financial aid need analysis. These include the calculation of a negative family contribution in need analysis, the conflict between student aid and public aid, the reduction in net benefits of college attendance for those who use loans to finance their higher educations, and the increased risk of loan default for low-income borrowers. The implications for higher education are discussed, including the specific problems of minority and low-income group enrollments in American higher education.

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MISSING COLLEGE ATTENDANCE COSTS: OPPORTUNITY, FINANCING, AND RISK

Thomas G. Mortenson

What does it cost to attend college?

This question has no simple answer. Part of the answer depends on which college the student attends, whether he lives in a dorm or an apartment or at home, what texts and course materials she must buy, whether he is enrolled full time or part time, and many other circumstances. Another part lies beyond the traditional design of student financial aid, which limits consideration of college attendance costs to direct and indirect costs. Other costs influence the thinking of many potential students as they make decisions regarding preparation, access, choice, persistence, and completion in higher education.

This paper illustrates a factor that financial aid administrators understand intuitively, but federal and state student aid policies do not address in the design of our major student aid programs: that is, three additional costs--opportunity, financing, and risk--have been omitted in the design of student aid programs. As a result, the equity of higher educational opportunity aims of student financial aid cannot be effectively addressed until student aid policy, funding, and administration adopt a broader definition of college attendance costs that fully and sensitively addresses the actual circumstances faced by potential college students who are economically marginal.

This paper, which takes an economic approach to the interpretation of college student enrollment behavior, is based on the economic theory of the individual investment decision, illustrated with examples and empirical data to highlight key points. There are other useful approaches to the study of enrollment behavior, but none are as tied to public policy making as the economic interpretation of human behavior and the selection of economic tools by government to address perceived enrollment problems.

Economic Theory of Higher Education Enrollments

Enrollments in higher education are the lesser of either student demand for higher education or the capacity of institutions to accommodate them. This is true at all levels, from the individual course to the nation's higher educational system. The number of students we count in a course, a program, a college, a state, or in the country is limited to the lesser of either the number of students seeking enrollment or the capacity of the system to accommodate them at that time and place.

The economic theory of student demand for higher education holds that an individual will choose to attend college if the perceived net benefits of college attendance exceed the net benefits of the available alternative choices. All future benefits and costs are calculated at present values. Implicit in this theory of student demand for higher education are a number of axioms:

1. Individuals seek to maximize their own welfare.
2. Pursuit of college enrollment is a matter of individual choice.
3. College attendance produces benefits to individuals, including both short-term consumption and long-term investment benefits.
4. College attendance entails costs for individuals, including direct, indirect, opportunity, financing, and risk costs.

This paper addresses the fourth axiom: the costs that establish net benefits of college attendance for individuals. Beyond the traditional concern for direct and indirect attendance costs, there are other types of costs that reduce the net benefits of college attendance. These costs are not addressed in student financial aid, yet they impact the enrollment decisions that student aid is designed to address.

College Attendance Costs

In student financial aid we generally address two kinds of college attendance costs, direct and indirect. Direct costs are those uniquely associated with going to college, such as tuition, fees, books, and supplies. Indirect costs are living expenses incurred while attending college, including food, housing, transportation, personal and medical care, clothing, recreation, and sometimes child care. Although financial aid normally makes standard allowances for these costs, professional judgment may be exercised to accommodate the unique circumstances of individual aid applicants.

This is well and good, but such efforts may be inadequate to effectively address the financial aid needs of at least two groups of Americans: minorities and those from low-income backgrounds. Both groups have experienced severe enrollment difficulties during the 1980s. I will return to these groups later in this paper. Here, I want to focus on the missing costs of college attendance.

Opportunity costs: Let us imagine a very low-income family with an older child ready for college. Julie has graduated from high school with good grades and test scores. She has also worked until now, and her paycheck goes toward buying food and clothing, paying the rent, and otherwise supporting her parents, brothers, and sisters. She applies to college and is admitted. She applies for financial aid and her case is recognized as full need. All of her direct and indirect costs are covered by a package of financial aid including grants, loans, and perhaps some work-study. But Julie still has a problem: if she goes to college, her family will lose the financial support that income from her job has provided until now. Her family will have less money for food, clothing, rent, and other survival needs. Julie faces the awful choice of abandoning her family for the pursuit of higher education, or forgoing college. She decides to ...

Here is another example. Clarence always loved cars. He worked through high school to buy and maintain a car. When he got out of high school, he worked full time, earned more money, and bought a fancier car with the help of a bank loan. But he recognized that unless he obtained further education, his future job prospects were dim. So he applied for college, was admitted, filed for aid, and received a package that satisfied his need for financial aid to cover direct and indirect attendance costs. But this package would not permit him to keep up payments on his prized car. Clarence faces a dilemma: if he goes to college he will have to give up the car because he will not be able to make the payments. Clarence faces an opportunity cost of college attendance. He decides to ...

While our sympathies in these cases might vary, the problem of unaddressed opportunity costs in financial aid haunts these prospective college students. Each has to sacrifice something important to them in order to attend college. For many young adults, fresh out of high school, these costs are quite low. They do not yet have family responsibilities or long-term debt obligations. So the net benefits of college look pretty good to them. Similarly, the laid-off factory worker or homemaker whose children are now in school has been relieved of responsibilities that have opportunity costs. College may seem more appealing--even necessary--than it did when job and family responsibilities precluded a commitment to higher education. But for others like Julie and Clarence, the things they would have to sacrifice to attend college may not seem worth the price. When that happens, the benefits of higher education to both the individual and society in later years may be sacrificed.

Financial aid does not address opportunity costs. In need analysis, a negative family contribution is calculated for the low-income family whose recognized needs exceed their resources. However, a negative family contribution--which would otherwise qualify an individual for financial aid beyond budgeted direct and indirect attendance costs--is zeroed out by federal decision. The basis for this is the policy decision to recognize and address only direct and indirect college attendance costs. Sometimes this policy is framed in language such as "student aid programs are not welfare programs." Clearly there are long-standing differences and friction between the philosophy and operation of student aid and public aid programs. But the low-income are growing in numbers--child poverty rates in the United States have increased by a third since the 1970s.

Financing costs: It's true that a loan dollar will buy as much higher education as a grant dollar. But borrowers know--or should, at least--that grant dollars are gifts while loan dollars must eventually be repaid. That repayment is costly. After leaving school one must repay not only what one received, but also origination and insurance fees and interest on the unpaid balance.

Here is an example. A promising but low-income student named Dale wanted to go to college. He applied and was admitted, then went through the financial aid application system. The financial aid office had good and bad news for Dale: it could meet his needs, but he would have to take out a student loan as part of his aid package. The loan would be for $2500. But an origination fee of $125 would first be deducted, then an insurance fee of $75, leaving him with $2300. He would still have to repay $2500, plus interest, after he graduated.

Dale tried to estimate how much this financial aid was going to cost him. Over four years he would probably have to borrow $10,000, of which he would receive only $9200. If he repaid these loans within five years after graduation, he would pay 8 percent interest on the unpaid balance during the first four years of repayment, and 10 percent interest after that. He would have to repay the $9200 he received, plus the $800 in fees he was charged, plus $2192 in interest, at the rate of $203 per month during the first four years of repayment and $205 per month during the last year.

If he repaid the loans over ten years, the monthly repayment would drop to $121 during the first four years of repayment, then rise to $128. But the interest charges would more than double to $5054. Dale knew that Congress was phasing out the tax deductibility of student loan interest charges, so he added 15 percent to the amount he expected to have to earn to make the interest payments. It added $10 per month to his required earnings. He recalculated the interest rate he would eventually have to pay on the amount he received. Instead of 8 percent he figured it was actually 12.6 percent if he paid off the loan in ten years, or 13.8 percent if he paid it off in five years. Dale knew of the benefits of college, but he was not certain they were worth the cost ...

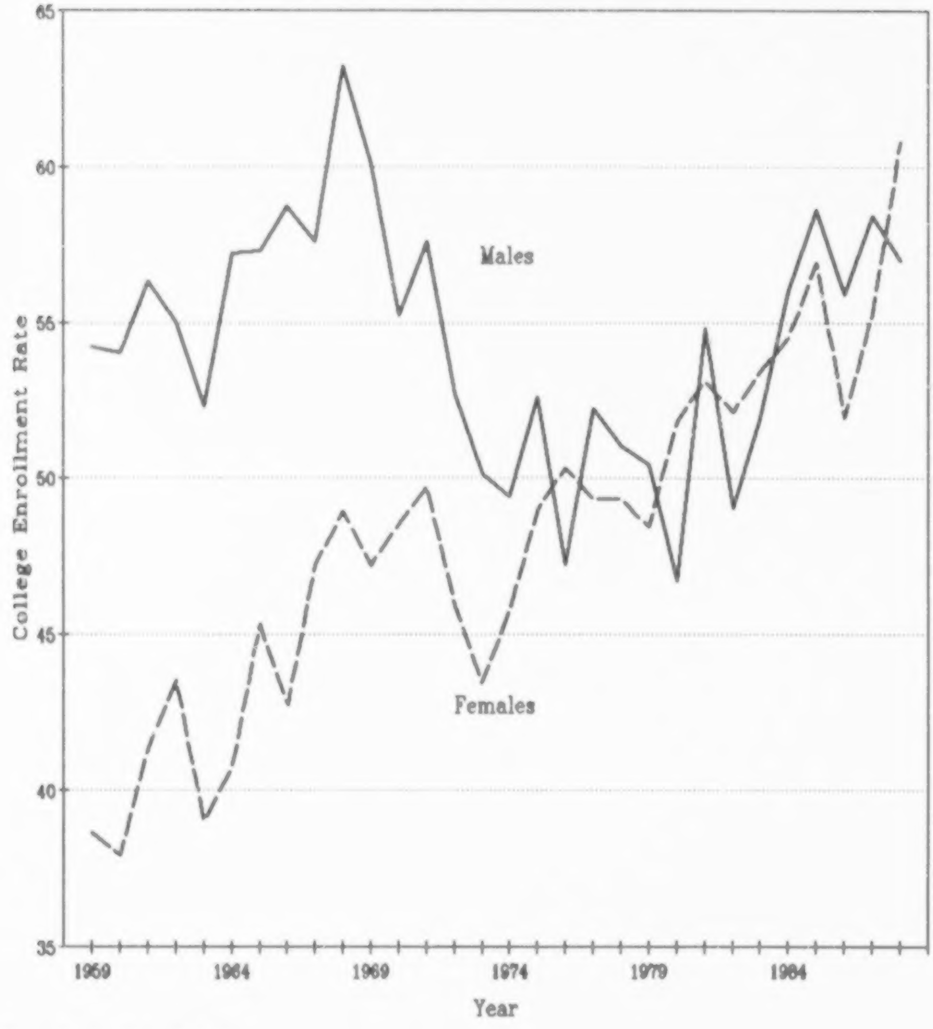
Risk costs: Again let me illustrate. Kyle was no more than an average student in high school. Getting good grades was always a struggle. But with the help of supportive parents and teachers Kyle made it through high school. Now he is faced with the prospect of college. He knows he needs a college education to improve his chances of getting his desired job, and his parents and teachers want him at least to try college. So he applies to college and is admitted, applies for aid and is told he is needy but not needy enough to qualify for grants or talented enough to get scholarship. He is offered a $1500 student loan that must be repaid after he leaves school. Believing that getting passing grades in college will be tougher than it was in high school, he is uncertain about his chances of graduating and getting a better paying job so that he can back the loan. Kyle faces a risk in taking out the loan, a risk that he will incur a debt without also receiving the benefits of a job at higher pay following graduation. He ponders the risk and calculates the odds. He decides to ...

Equity of Higher Educational Opportunity

The aim of need-tested student financial aid is to equalize higher educational opportunity for prospective students. Let us take a moment to see how three groups of Americans have fared regarding that aim. We will examine the college enrollment of females (compared to males), minorities (compared to whites), and students from low-income families. We will use data collected in the Current Population Survey and published by the Bureau of Labor Statistics and the Bureau of the Census, and the National College Freshmen Norms. When we do so we will find different results for each group.

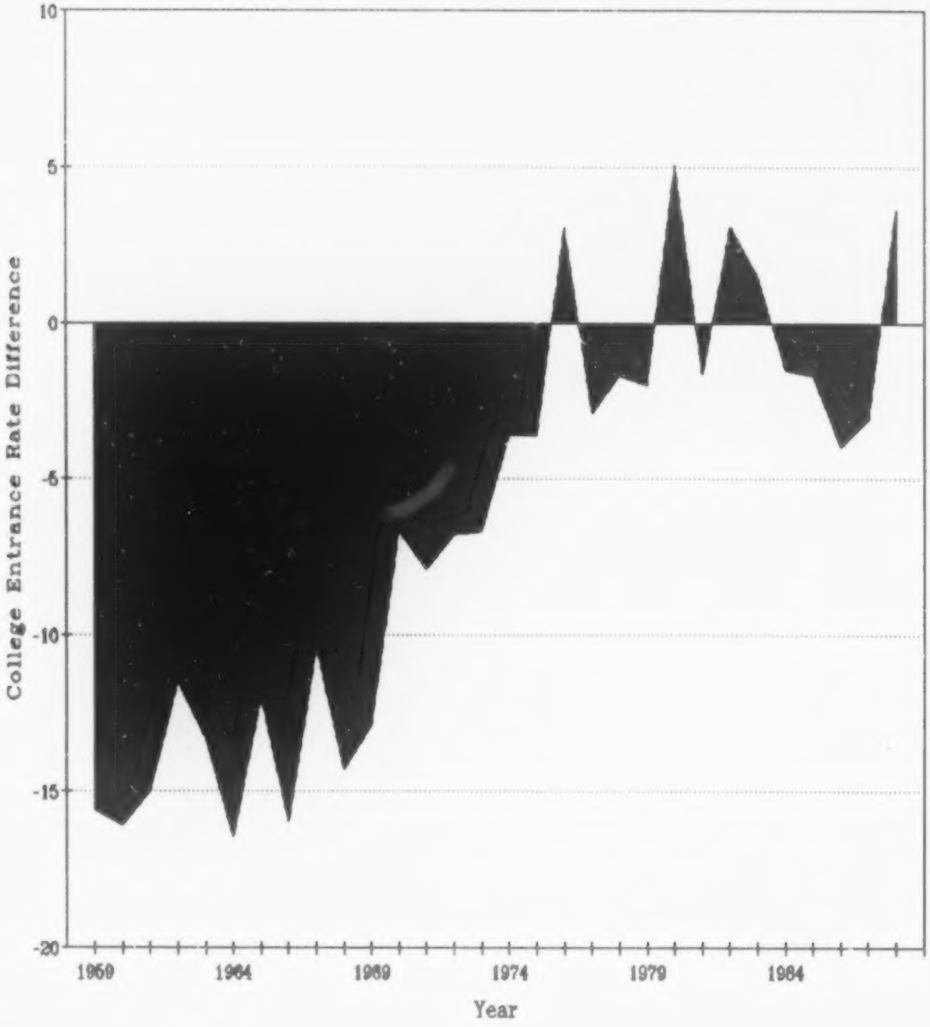
Females: The Bureau of Labor Statistics has published data on high school graduates and their enrollment in college within the following year, by gender for the years 1959 through 1988--nearly three decades (Labor Statistics, 1959-1988). From these data we can calculate college entrance rates by gender and year, and compare these rates over time. These rates are charted in Figures 1 and 2.

FIGURE 1
COLLEGE ENROLLMENT RATES FOR RECENT HIGH SCHOOL GRADUATES BY GENDER
1959-1988



Source: Bureau of Labor Statistics

FIGURE 2
COLLEGE ACCESS GAP
FOR RECENT FEMALE HIGH SCHOOL GRADUATES
1959-1988



Source: Bureau of Labor Statistics

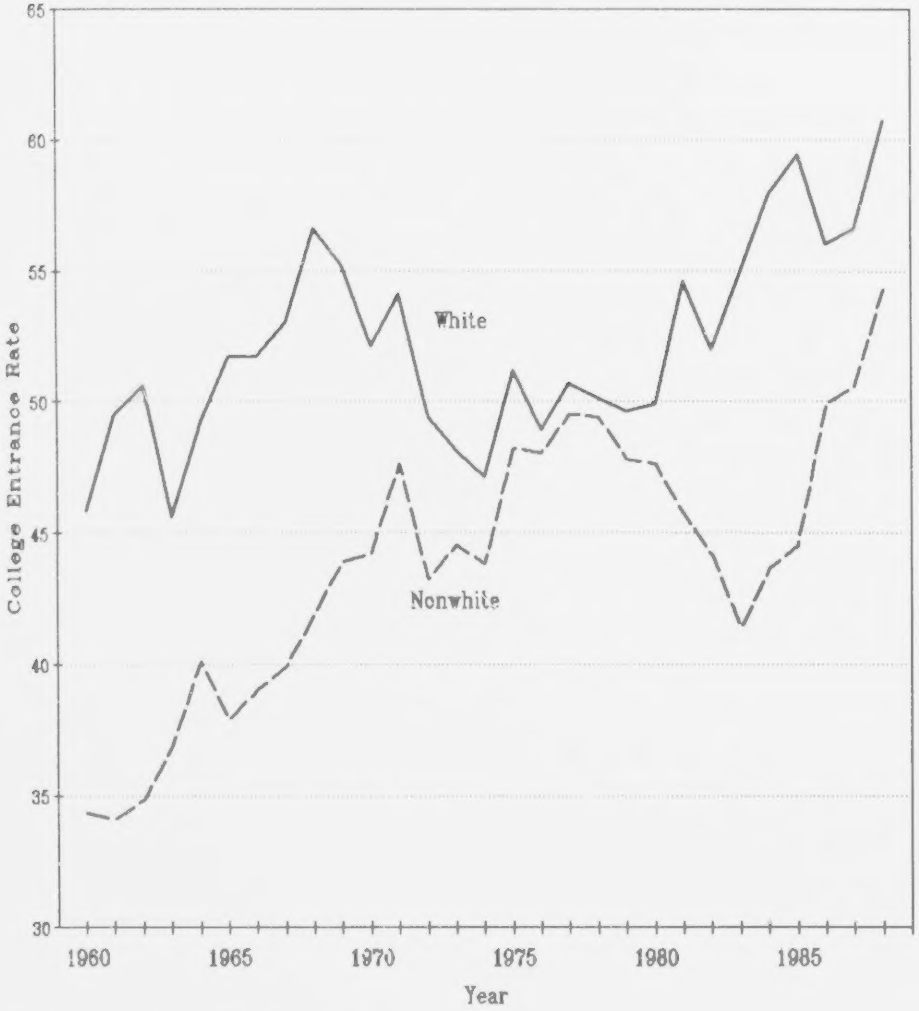
The results could not be more striking. As shown in Figure 2, the gap between male and female college entrance rates for recent high school graduates averaged 14 percent between 1959 and 1969. That is, the male college entrance rate exceeded the female college entrance rate by an average of 14 percent year after year. Then, between 1970 and 1976, this access gap was closed. Between 1976 and 1988, the rate for females averaged .3 percent below the rate for males. Overall, the picture that results is one of a very large gap in equity of higher educational participation for recent female high school graduates between 1959 and 1969, followed by five years during which the gap narrowed, followed by approximate parity with males for the last 13 years.

Nonwhite minorities: The picture of success in equity of higher educational opportunity for females is usefully contrasted with the experience of racial minorities over the same period of time. Again we will use the Bureau of Labor Statistics data on college enrollment rates of recent white and nonwhite high school graduates for the period 1960 through 1988. These data are shown in Figures 3 and 4. (To illustrate trends, the nonwhite data shown is a plot of a moving three year average. This procedure removes some of the statistical noise in the data due to sampling error, and emphasizes the underlying trend.)

Distinct eras of higher educational enrollment equity for racial minorities are evident in these data. During the first era, between 1960 and 1969, nonwhite college entrance rates averaged 13 percent below the rates for whites. Then, during the second era between 1970 and 1975, the difference between the rates for whites and nonwhites closed. During the third era, between 1976 and 1979, the nonwhite college entrance rate averaged less than one percent below the white rate. During the fourth era, between 1980 and 1983, the old gap between whites and nonwhites reemerged. During the fifth era, between 1983 and 1986, the difference between the nonwhite and white college entrance rates for recent high school graduates averaged nearly 14 percent--a greater access gap for nonwhites than the average for the 1960s. The most recent data from this and other sources suggest that the gap may once again be closing, but the trend is not yet clear. Overall, the larger picture is one of higher educational equity achieved for nonwhites compared to whites during the 1970s, but lost during the early 1980s, with partial recovery during the second half of the 1980s.

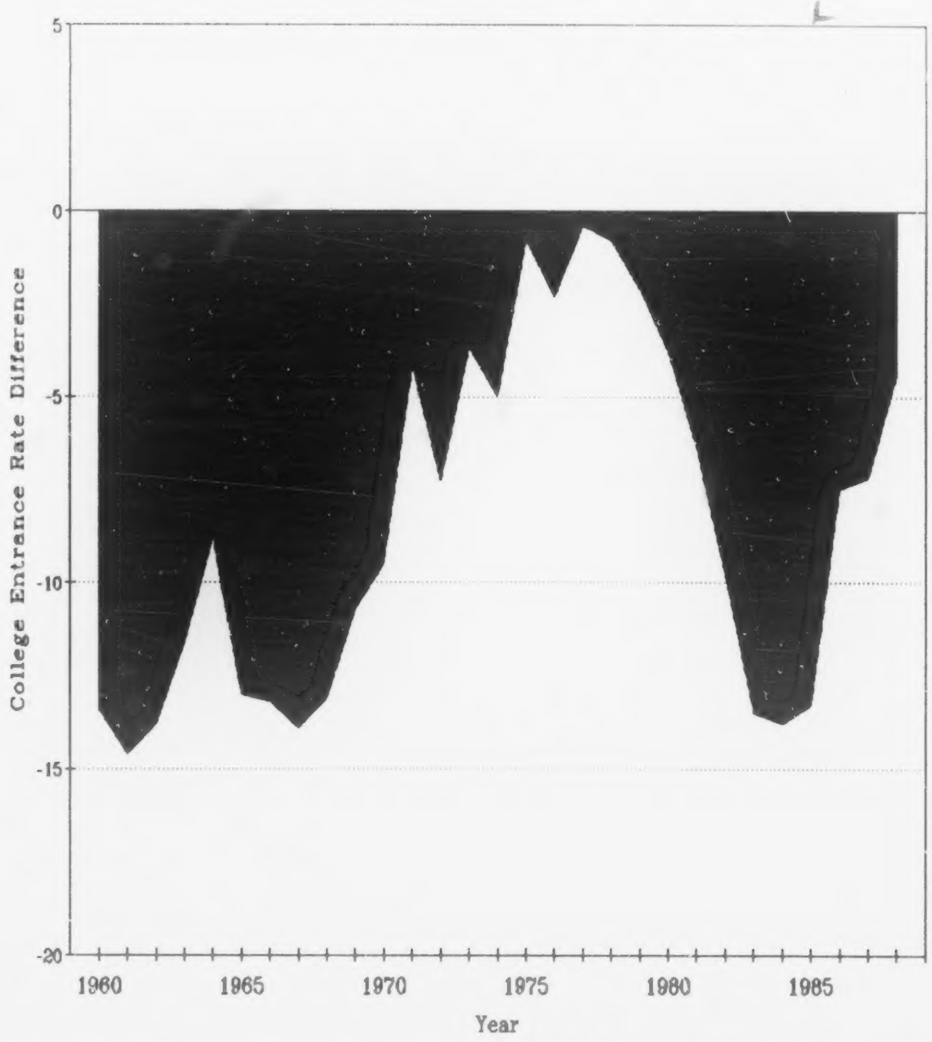
Low income groups: Analysis of college participation by students from different income backgrounds produces results that are similar to the results for racial minorities. The general pattern (shown in Figure 5 on the following page) is one of substantial improvement in college participation rates for those in the bottom 10 percent of the family income distribution for families headed by persons between 35 and 54 years of age between 1966 and the mid-1970s. The bottom 10 percent of families had 1987 incomes of from zero to $11,616. These relatively high college enrollment rates persisted until about 1981, after which they declined almost steadily through 1988 to about 77 percent of the peak participation reached in 1977.

FIGURE 3
COLLEGE ENTRANCE RATES FOR WHITE AND NON-WHITE
RECENT HIGH SCHOOL GRADUATES IN THE U.S.
1960-1987



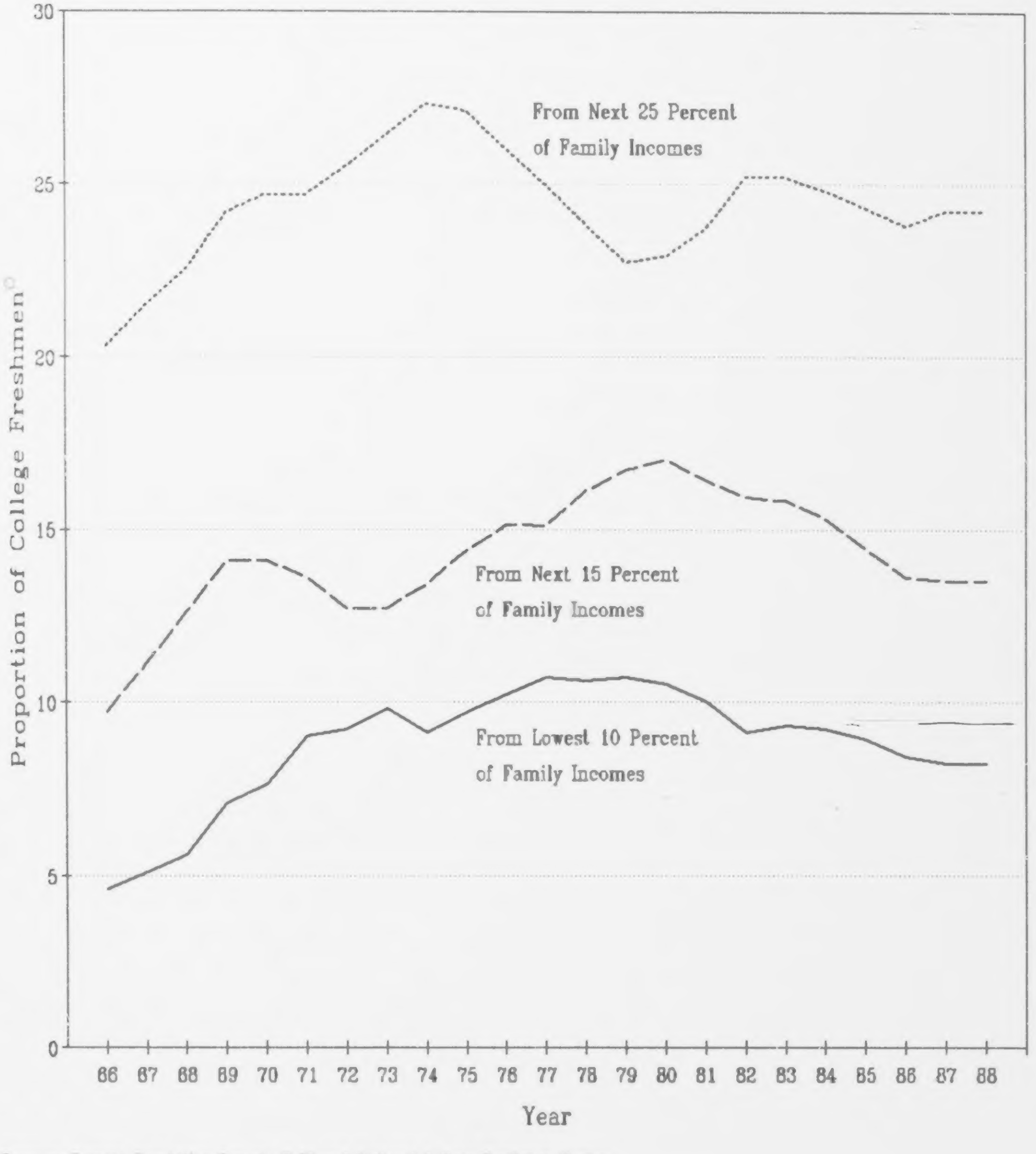
Non-white data is a plot of a moving three year average.

FIGURE 4
COLLEGE ACCESS GAP
FOR NONWHITE RECENT HIGH SCHOOL GRADUATES
1960-1988



Source: Bureau of Labor Statistics. Plot is moving 3 year average.

FIGURE 5
PROPORTIONAL REPRESENTATION OF COLLEGE FRESHMEN FROM DIFFERENT FAMILY INCOME RANGES
1966-1988



Sources: Current Population Reports P-60 and National College Freshmen Norms

A similar pattern holds for students from families with incomes between the tenth percentile and first quartile of family incomes for heads between 35 and 54 years of age. This range corresponds to 1987 incomes of $11,617 to $23,259. College enrollment rates for these families increased substantially from 1966 to 1980, and have declined steadily since then. The 1988 college participation rate from these families is about 79 percent of the peak reached in 1980.

Student financial aid policy, especially that of the federal government, has been largely directed toward the lowest-income portions of the population. Quite remarkable gains in the participation of low-income students in American higher education were recorded between 1966 and 1980. The available evidence indicates that since 1980, 40 to 50 percent of those gains have been lost.

Student Aid Policy Issues

To the extent public policy is concerned about inequities in college enrollment patterns among different parts of the population, the preceding charts raise serious concerns. The great disparities in college enrollment during the 1960s were largely corrected during the first half of the 1970s and remained corrected until the late 1970s. Thereafter, old inequities reemerged--especially for racial minorities and the lowest-income groups.

One must be cautious in seeking to identify culprits because we know marginal college attendance is influenced by many factors. However, we do know from other studies that minorities have not left white institutions to attend historically black institutions. We know they have not left postsecondary education for the military. And we have some partial but not conclusive evidence that minorities have not left colleges for vocational postsecondary education. What we do know is that opportunity, financing, and the risk costs of college attendance have not been addressed in financial aid policy.

Negative family contribution: Student aid does not effectively address opportunity costs of college attendance. This is a serious problem for aid applicants from income levels below the family maintenance allowance. For aid applicants from these families, the loss of the contribution of income from a family member who goes off to college may jeopardize the welfare of the remaining family members.

Need analysis in student financial aid had, until recently, a way of acknowledging at least the existence of opportunity costs for very low-income aid applicants. The Uniform Methodology was administered by organizations with a direct involvement in assessing student/family ability to pay for college, e.g., ACT, CSS, NASFAA, etc. Until 1988-89, when the Uniform Methodology was replaced by the Congressional Methodology, a negative family contribution was calculated and reported to aid officers. Although student financial aid was not provided to finance the negative family contribution, the information enabled student aid officers to rank aid applicants whose negative parental contributions had all been set to zero according to federal policy. This practice acknowledged that not all zero family contribution aid applicants were identical--some were clearly more needy than others.

Beginning in 1988-89, the Uniform Methodology practice of calculating a negative family contribution was superseded by the Congressional Methodology, which does not report a negative family contribution. In the eyes of Congress, financial aid could not be used to finance a negative family contribution, and therefore there was no need to report one. Congress denied to the financial aid officer the opportunity to distinguish between zero family contribution aid applicants according to the amount of their negative family contribution--a previous professional practice.

The Congressional Methodology practice of not reporting negative family contributions for aid applicants continues the federal policy of trying to separate student financial assistance from public assistance. Federal student financial aid is limited--by federal decision--to funding only direct and indirect costs of college attendance. Opportunity costs of college are not to be financed through student aid programs. Conceptually, opportunity costs of college attendance for very low-income families are to be addressed through welfare assistance, not student financial assistance.

In practice this has not worked well. Until 1986, the receipt of financial aid was sometimes used to reduce public aid benefits, depending on the policies and practices of the public aid programs in each state. In the 1986 Amendments to the Higher Education Act, Congress attempted to address this issue by enacting the provision that federal Title IV student aid funds used to pay for tuition, fees, books, supplies, transportation and miscellaneous personal expenses could not be considered as income or resources to determine eligibility for any other program where federal funds were used. That is, federal student aid funds could not be used to reduce welfare eligibility.

This provision addresses one small but important part of the conflicting overlaps between student aid and public aid. However, significant conflicts remain between the two programs at the federal and state levels. A partial list of these conflicts includes the following:

1. Non-federal student financial aid can still be used to reduce welfare eligibility. This would include state, institutional, and private student aid program funds.
2. Non-Title IV federal student aid--e.g., health professions student aid programs--can be used to reduce welfare eligibility.
3. Financial aid to cover room and board costs from any source including federal can still be used to reduce welfare eligibility.
4. The family maintenance allowances differ between student aid need analysis and welfare eligibility formulas. A negative family contribution calculated under student financial aid need analysis will not affect public aid eligibility.
5. Because of state administration of public aid programs, students under identical circumstances can be treated very differently in different states.
6. Student aid affects welfare program eligibility differently, depending on the program (AFDC, food stamps, medicaid, etc.).

Recently, the enactment and implementation of the Family Support Act of 1988 appears to have opened more possibilities of student aid/public aid conflicts. Under the provisions of the Act, individuals who receive Aid to

Families with Dependent Children (AFDC) incur an obligation to pursue education, training, or employment to eventually remove themselves from welfare programs. Questions that have arisen include the following:

1. Will students currently receiving AFDC be allowed to continue in college?
2. If someone has not started college, will states allow them to do so and continue to remain eligible for AFDC?
3. Will state welfare agencies pay any costs of higher education with AFDC dollars?

Because welfare programs continue to be joint state-federal efforts, the lingering problems of different standards in different states will likely persist. All of the above listed questions still remain. However, the obligation to pursue education, training, or employment to gain AFDC eligibility does move the welfare program more toward the higher educational program objectives of preparing people for socially productive roles.

Reduction in net benefits of college: The financing costs involved in student loans pose a burden--and hence decrease the net benefits of college--but only on those who use them. Due to the lack of growth in grant assistance for poverty level student aid applicants since the late-1970s, the low-income are especially burdened by the shift in federal student aid from gifts to loans. Those who do not take on debt to finance college attendance costs--the fortunate children of affluent parents--can get through college without a repayment obligation. For the rest, use of loans in student aid reduces net benefits of college attendance, and the greater the dependence on loans to finance college, the greater is the reduction in college benefits.

At some point the repayment burdens of loans could reduce the net benefits of college attendance to the point where college is no longer worth attending. If an individual discounted the promise of future rewards of a college education and focused instead on the more immediate cost issues involved in financing that education, the net benefits of college attendance would be diminished. An economist would say such an individual used a high discount rate in evaluating the college investment option. Those from low-income backgrounds might argue that a high discount rate reflects a survival strategy learned through years of meeting living situations on a day-to-day basis.

We can gain some insight into the federal shift in student aid from grants to loans by comparing the maximum student aid eligibility for very low-income aid applicants over time--the period of time corresponding to loss in enrollment shares from lowest family income levels. A student from a poverty level family income background would always have qualified for a maximum Pell Grant to attend a public two-year college as a commuter. Between 1975-76 and 1979-80, this Pell Grant would have covered 46 percent to 50 percent of direct and indirect college attendance costs. The remainder during this period could have been financed by a student loan ranging from $1385 in 1975-76 to $2269 by 1980-81. Then, during the 1980s, the proportion of college costs covered by the maximum Pell Grant dropped to about 35 percent of costs, and the remainder could not have been financed by a maximum Guaranteed Student Loan of $2500. Additional borrowing from more expensive student loan programs might have been required. Thus, since 1975-76, student financing aid became progressively more expensive to the very low-income student aid applicant. Loans went from

50 percent of the aid package to 65 percent, and the costs of the loans available to the student gradually grew as well.

Risk costs: Similarly, the risk cost issue deserves careful consideration, since the low-income have been forced to borrow ever larger amounts of money to make up for the lack of growth in gift aid programs. Inevitably, the net benefits of college are reduced for those prospective students who must borrow to finance college attendance costs. Loans are costly because eventually they must be repaid. Their costs are further influenced by the risk factor of not graduating from college. These risks are ultimately borne by the federal government and all taxpayers through the federal guarantee to the lender that his loan will be repaid--if not by the borrower then by the federal government.

The relationship between loan default risk and income of the borrower is highlighted in Figure 6 with data prepared by Davis at the Pennsylvania Higher Education Assistance Agency. Default rates ranged from more than 40 percent for borrowers with adjusted gross incomes of less than $6000 per year, to about 3 percent for those with adjusted gross incomes of greater than $42,000 per year. While the ultimate costs of default are borne by taxpayers, federal efforts to collect from student loan defaulters will make life uncomfortable as long as a loan balance remains.

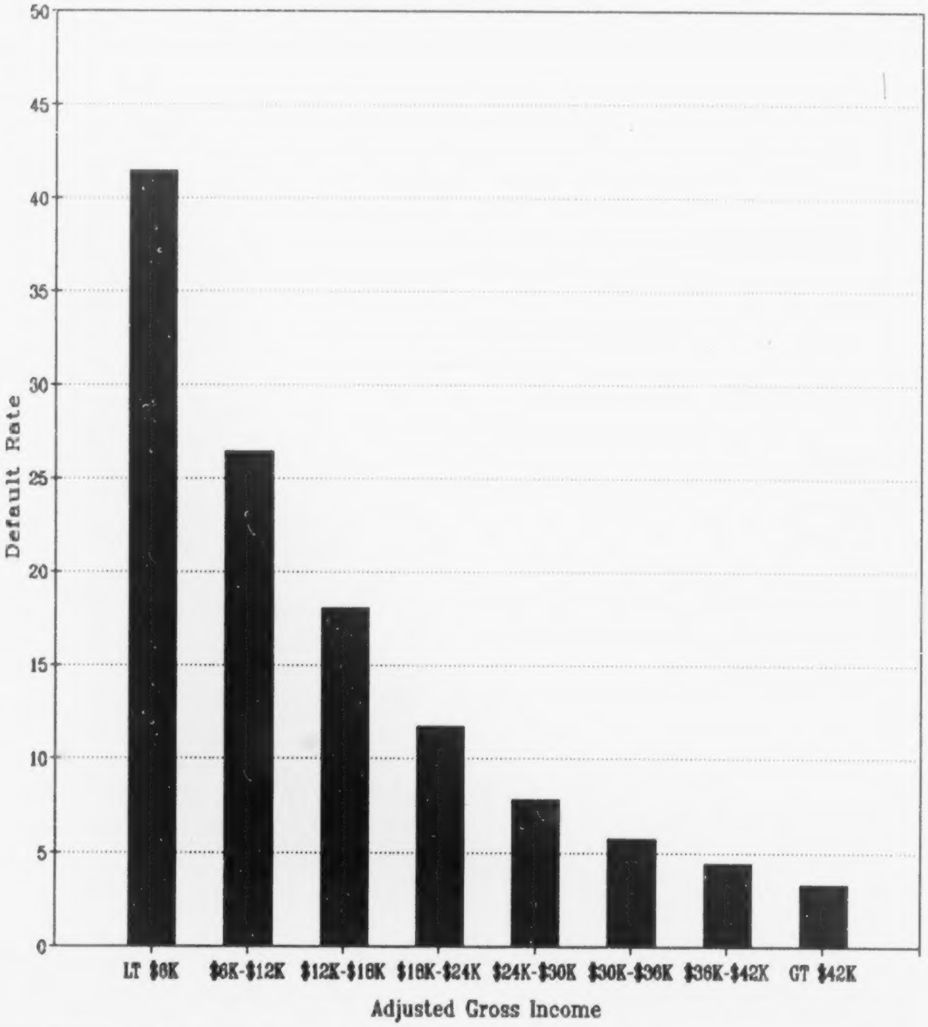
The Shift from Grants to Loans

In many important public policy respects, the problems resulting from lack of attention to opportunity, financing, and risk costs in the design of financial aid programs have been magnified by the federal shift from grants to loans since the mid-1970s. Because opportunity, financing, and risk costs were subordinated to concern over the federal budget deficit in this transition, a number of very serious problems have emerged. I will identify two.

Minority issues: Blacks, Chicanos and the low-income are seriously under represented in American higher education. At least some of the reasons are obvious. In general minorities approach higher education less well prepared to meet the academic challenges of college life. So they face a greater risk if they choose to attend college, and that risk affects their perception of the attractiveness of student loans compared to grants. They are characteristically low-income, and the low-income are far less likely to view student loans favorably than are students from more affluent backgrounds. In low-income families potential college students often play supportive roles that they cannot easily abandon. And if they receive welfare benefits, going to college and getting financial aid may jeopardize those benefits. Minority males get jobs after graduation that pay far less to them than to white males, yet they are likely to have a larger loan burden than whites if they persist through four or five years of college. All of these very real considerations of the special kinds of opportunity, financing, and risk costs of college attendance work extraordinarily on the populations most dependent on financial aid. Yet financial aid, somehow, manages to exclude these costs from program design and execution. The result is that now, in the late 1980s, we are no longer serving the most vulnerable populations as well as we did in the 1970s.

FIGURE 6

DEFAULT RATES FOR GUARANTEED STUDENT LOANS
BY INCOME OF THE BORROWER
1985



Source: Pennsylvania Higher Education Assistance Agency.

Loan defaults and the federal budget deficit: The problem of guaranteed student loan defaults is sufficiently large that, in the context of other federal budget problems, it poses a threat to all federal student financial aid programs. And federal student aid dwarfs all other sources of student aid combined. Partly, student loan default is a budget problem, but partly it is a perceptual problem with political consequences. Under the climate of the federal budget deficit, with budget cutters looking for program funding to reduce or eliminate, the adverse publicity surrounding guaranteed student loan defaults is unwelcome--and with forethought would have been unnecessary. We know who defaults and why. As the Belmont Task Force (1988) found:

> Contrary to popular perception, the typical defaulter is not a "deadbeat" who refuses to pay, but appears to be a dropout who is unable to pay. Defaulters tend to be first year students, from low-income and minority backgrounds, with a small loan balance (90 percent less than $5,000) who did not complete much more than the first year, have borrowed only once, receive little or no assistance from parents in repaying, are likely to be unemployed when the loan comes due, and never make a first payment. The present default problem is thus predominantly structural. These costs are not likely to be recovered under the current terms of the program.

The Belmont Task Force ended its examination of the student loan default problem with the following conclusion:

> The only way to accomplish a major reduction in the default rate is to restrict access to high-risk students until they have had a chance to demonstrate their ability to make satisfactory academic progress. However, this would result in a denial of educational access for such students, unless substantially higher appropriations for Pell Grants and SEOGs are assured for them, as well as increased funding for special service programs which encourage their retention.

Implications for Higher Education

The United States is undergoing demographic and economic changes that require extraordinary investments in our human resources to preserve the political system that leads the world. On the one hand, an aging white human capital stock must be replenished, not just with more whites, but with better educated minorities. On the other hand, the leadership role requires domestic peace in addition to prosperity. The path we are now on assures us neither.

Our college-age population is shifting toward minorities, and in some parts of the United States the minority population is now the majority. The performance of minorities on standardized tests (e.g., the National Assessment of Educational Progress and the ACT Assessment) has recently improved. So too have the rates at which minorities persist through high school to graduation. By these measures minorities are better prepared to undertake college than they have ever been. But that same minority population has moved away from higher education during this decade. College enrollment rates for Blacks and Hispanics have dropped. The consequences for the human capital resources of the United States are clear and compelling: unless and until the growing minority population is capitalized to replace the declining white human resource supply, the productive potential of the human resources of the United States will almost certainly deteriorate. The role of global leadership may pass to other nations because we have not prepared ourselves to address the complex and competitive challenges of the world community.

The second problem confronting our place in the world derives from the surge toward economic inequality that has occurred in the United States over the last two decades. This inequality contributes directly to domestic instability, and instability diverts attention, energy, and resources from productive activities. The signs of growing inequality are everywhere in socioeconomic indicators of our nation's health. There are more rich families and low-income families--and consequently fewer middle income families--than at any time in our post World War II history. Child poverty rates in the 1980s are a third higher than they were during the 1970s. Life expectancy is growing for whites while shrinking for blacks. The proportion of the population in prison in 1986 was twice the rate that held between 1950 and 1975, and it is rising rapidly.

Many, including this author, view education as the ladder by which those with the talent and ambition to succeed may improve their condition in life. By their efforts they add to our collective standard of living. The ladder of socioeconomic mobility has many rungs on it, one of which is student financial aid. If the ladder is to continue to perform its function of fully developing human potential in American society, each of its many rungs will require continuous scrutiny and nurturing support.

Student financial aid needs that attention now. Two growing proportions of our population--low-income and minorities--are not being adequately served by the present array of student aid programs. Closer attention to the actual college attendance costs faced by these populations could add to the human resources upon which our future depends.

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The Impact of Increased Loan Utilization Among Low Family Income Students

Thomas G. Mortenson

February 1990

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THE IMPACT OF INCREASED LOAN UTILIZATION AMONG LOW FAMILY INCOME STUDENTS

Thomas G. Mortenson

SUMMARY OF FINDINGS AND CONCLUSIONS

This study set out to examine the relationship between the decline in low income participation in higher education, and the substitution of loans for grants in federal student financial aid programs. The study explored this relationship from two perspectives, one based on economic investment theory and the other based on attitudinal survey data. The findings from both theoretical and attitudinal approaches lead to a common conclusion: loans are not equivalent substitutes for grants for all aid applicants, especially low income aid applicants. When loans are substituted for grants for low income aid applicants, the enrollment problems that were solved by grants are recreated by loans.

The enrollment objective of student financial aid is to remove financial barriers to higher educational opportunity for those who can demonstrate need for assistance to pay college attendance costs. Between 1966 and the late 1970s, when grant assistance was greatly expanded, the participation of individuals from lower income groups also greatly increased. Between 1980 and the present, when loans have become the dominant form of federal student financial aid, between 40 and 50 percent of the participation gains made by students from the bottom quartile of the family income distribution between the mid 1960s and the mid 1970s have been lost.

Economic investment theory provides one means for interpreting this enrollment loss for low income students. Loans have characteristics that differ from grants: they add risk and financing costs to the higher educational investment decision, and the addition of these costs reduces the net benefits of college attendance for those who use student loans. The more loans are used to finance college, the greater the reduction in net benefits of college attendance.

The cost characteristics of loans have a disproportionate adverse impact on low income students for two reasons. First, higher education is a far riskier investment decision for low income students because they characteristically demonstrate less promise for academic success, and hence are less likely to earn the higher incomes following graduation that enable them to repay their loan obligations. Family income is very strongly correlated with both success in high school (as measured by high school grades and graduation rates) and performance on the standardized tests used for college admission. Success in high school, measured potential on standardized tests, and success in college are all very highly correlated. Thus, low income students face inherently higher risk of not completing college. When they encounter student loans in their financial aid package, this risk imposes cost-like considerations that reduce the prospect of net benefits of college enrollment for them.

The second unique cost characteristic of student loans is their financing costs. Unlike grant assistance, loan principal must be repaid to the lender, along with insurance and origination fees, plus interest on the unpaid balance. A student who borrowed the maximum Stafford Student Loan (formerly called Guaranteed Student Loan) amount for four years could repay as much as $19,948 in principal, interest, and fees after leaving school. If the student prolonged his studies and borrowed more, he could repay as much as $25,970 after college. Very simply stated, loans not only reinsert cost barriers to higher education that grants eliminated, but loans add to these cost barriers by adding fees and interest charges to student financial aid. The replacement of grant assistance with loans substantially reduces the net benefits of college for those who use loans to finance attendance costs. And the more loans are used to finance these costs, the greater the reduction in net benefit of college attendance.

We also explored attitudinal survey data in this study to examine the views of people from different income backgrounds towards educational investment questions. In particular, we examined people's attitudes toward higher education as an investment, educational loans, and willingness to assume financial risk in an investment decision. As one might expect, poor people answered these questions differently than people from more comfortable financial backgrounds. These attitudinal differences are especially important to the higher educational investment decision.

People from low family income backgrounds hold considerably different views about the worth of higher education than do people who are financially well off. In the 1989 survey sponsored by the Council for the Advancement and Support of Education, 60 percent of those from family incomes of more than $50,000 per year felt the lifetime return on a college education was worth more than it cost to attend college, compared to 27 percent of those from family incomes of less than $20,000 per year.

People from low family income backgrounds are--and always have been--less willing to borrow money to finance educational expenses than are people from higher family income levels. In the Federal Reserve System surveys of consumer finances conducted in 1957, 1967, 1977 and 1983, adults representing household incomes of less than about $25,000 per year (1983 dollars) were consistently about 80 to 85 percent as likely to think favorably toward borrowing to finance educational expenses as were people with incomes of more than about $34,000 per year. The attitude of the poor toward borrowing is not confined to education. For any purpose, the poor are less likely than the financially better off to be willing to assume debt.

The Federal Reserve System surveys give us a clear indication of where on the income scale favorable attitudes toward educational loans begin to break down. In the 1983 survey, this point was about $20,000. (Inflated to 1989 dollars, the equivalent income break point would be about $24,500.) Above this income level, about 85 to 90 percent of adults have a favorable attitude toward borrowing to finance education. Below $20,000 of income, the proportion of respondents who think borrowing to finance educational expenses is a good idea drops off sharply, to a low of close to 60 percent of those with incomes of $4,000 to $6,000 per year.

People from low income backgrounds are also reluctant to take financial risks for investment purposes. The Federal Reserve System surveys show extraordinarily strong relationships between income and willingness to take financial risks. Below about $7500 in income (1983 dollars), about 30 to 35 percent of heads of families with children said they were willing to take financial risks, compared to nearly 70 percent of those from families with $30,000 to $50,000 in income, and nearly 100 percent of those from families with incomes of more than $200,000 per year. Because loans to finance educational investment involve risk, and higher educational investments are unusually risky for people from low income backgrounds, one cannot conclude that low income people are neutral about borrowing to finance educational expenses.

Finally, this study examined a variety of behavioral data related to higher educational enrollments and student borrowing to finance educational costs. The results of this portion of the study appear to be consistent with the theoretical and attitudinal findings.

First, in terms of higher educational participation, the college enrollment rates of students from poor family income backgrounds increased when net college attendance costs were decreased through the expansion of student aid programs based on grants between the mid 1960s and the late 1970s. Then, during the 1980s, when net college attendance costs were greatly increased by the substitution of loans for grants, between 40 and 50 percent of these enrollment gains were lost.

Second, for those from poverty level family income backgrounds who managed to gain access to higher education, we found changes in their enrollment behavior related to the price of the colleges where they enrolled. Basically, some low income students moved down the price ladder of higher education--from universities and four-year colleges to two-year colleges--to attend college at a more affordable cost.

Third, despite the migration of poor students down the price ladder of higher education, the greatest growth in indebtedness during the last five years has been among the very poorest enrolled students. In the early 1980s, the highest levels of indebtedness were held by students from middle income families. In the late 1980s, the highest debt levels are held by the poorest students enrolled in higher education. During this interval, the greatest growth in indebtedness was among these lowest income borrowers.

Finally, after student loan borrowers leave college, the highest default rates on loan obligations are among the very poorest of those who borrowed to finance educational expenses. The 1985 Pennsylvania study found that default rates ranged from a high of 41.5 percent among borrowers with incomes of less than $6,000, to 3.4 percent among borrowers with incomes greater than $42,000 per year. Similar results have been reported from New Jersey.

From each perspective examined here, loans are not substitutes for grants for low income students. Only grants achieved the enrollment gains made by students from low income families between 1966 and the late 1970s. When loans were substituted for grant aid to low income students, college access dropped, college choice deteriorated, and default rates increased. In every respect examined, low income students suffered from the loss of grant assistance and the attempt to substitute loans for grants. To the extent that the aims of student aid are to enhance higher educational opportunity for those with financial need to pay college attendance costs, loans have been counterproductive for some groups seeking the benefits of higher education in their lives.

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THE IMPACT OF INCREASED LOAN UTILIZATION AMONG LOW FAMILY INCOME STUDENTS

Thomas G. Mortenson
The American College Testing Program

I. Introduction

The Problem

Since 1980, student loans have replaced grant assistance as the largest program of federal student financial aid. Also since 1980, the participation in higher education of students from low family income backgrounds has seriously eroded from the levels achieved by the second half of the 1970s. Is this a coincidence? Or could the substitution of loans for grants have contributed to the loss of higher educational participation by the poor?

This paper examines economic investment theory and attitudinal and behavioral data on loans, investment, risk, and default to identify the population groups most likely to be reluctant to use loans to finance their higher educational investment and to be unsuccessful when they do use student loans to finance educational costs.

This paper contends that loans have been used inappropriately when they do not advance the goal of student financial aid to enhance postsecondary educational opportunity. It is generally held that loans cost the federal government about a third as much as the equivalent in grant assistance. The budgetary view, therefore, sees loans as less expensive substitutes for grant aid to students. This view does not consider the possibility that all populations that apply for financial aid to finance their college attendance costs see loans as equal substitutes for grants. This paper will seek to identify groups within the student aid applicant population whose attitudes and behaviors mark them as significantly less likely to benefit from loan-based financial aid.

While a loan dollar received by the student will buy just as much higher education as a grant dollar, people correctly perceive loans to be more costly than grants. Loans must be repaid, along with origination and insurance fees and interest, usually after the borrower leaves school. They are also more costly because they introduce the element of risk and uncertainty into the financially needy student's enrollment decisions. The net result could be interpreted as replacing one set of financial barriers to higher educational participation with another set of financial barriers.

The reintroduction of financial barriers through loans contradicts the aim of student aid to eliminate financial barriers to higher educational opportunity. The first federal need-based student financial aid programs were created in the Higher Education Act of 1965. Congress was clear in its statement of the problem it saw:

> The urgent need for new congressional initiative in the field of student financial assistance cannot be stated too strongly. Data on both the increasing costs of education and the mounting numbers of youth, capable and deserving of higher education, but without the means to acquire it, powerfully demonstrate the magnitude of the challenge.
>
> - Report of the House Committee on Education and Labor on the Higher Education Act of 1965, July 14, 1965.

In 1972 Congress redesigned the federal student aid programs and more sharply focused legislative intent on equality of higher educational opportunity through direct student assistance. Gladieux and Wolanin (1976), in their review of the 1972 Education Amendments, concluded the following:

> One theme above all dominates the law and the legislative history. The equalization of opportunities for higher education, a goal historically more incidental than integral to federal involvement in this field, clearly became the central commitment of the federal higher education policy with the passage of the Educational Amendments of 1972.
>
> As an abstraction, equal opportunity is implicit throughout the bill - in the provisions for community colleges and occupational education, in the state planning provisions, in the institutional aid formula. But operationally, its principal meaning was that lack of money should not be a barrier to an individual's pursuit of education or training beyond high school. Thus the equal opportunity theme is most directly expressed in the student aid provisions, which form the centerpiece of the legislation. Removing the financial barriers facing students was the overriding concern of the legislators, as it had been of the Carnegie Commission and the Rivlin Report.
>
> The law embraces a set of new and old student assistance programs designed to ensure equal access to the postsecondary system and to go far toward ensuring equality of choice among institutions ....

In this paper, we first describe enrollment problems experienced by low income students in higher education during the 1980s, and their borrowing and default experiences with the Stafford Student Loan Program. We then develop the general model of higher educational investment by individuals in terms of benefits and costs, and explore the special costs imposed by student loans that reduce the net benefits of a college education to certain groups who use them. Then, we review several sets of survey data to assess how different population subgroups perceive the benefits and costs of higher education, and how student loans influence the costs and net benefits of higher education faced by student aid recipients. Finally, we identify several important public policy problems associated with student loans.

We introduce the issue by describing the replacement of federal grant assistance with loans during the 1980s.

The Federal Shift from Grants to Loans

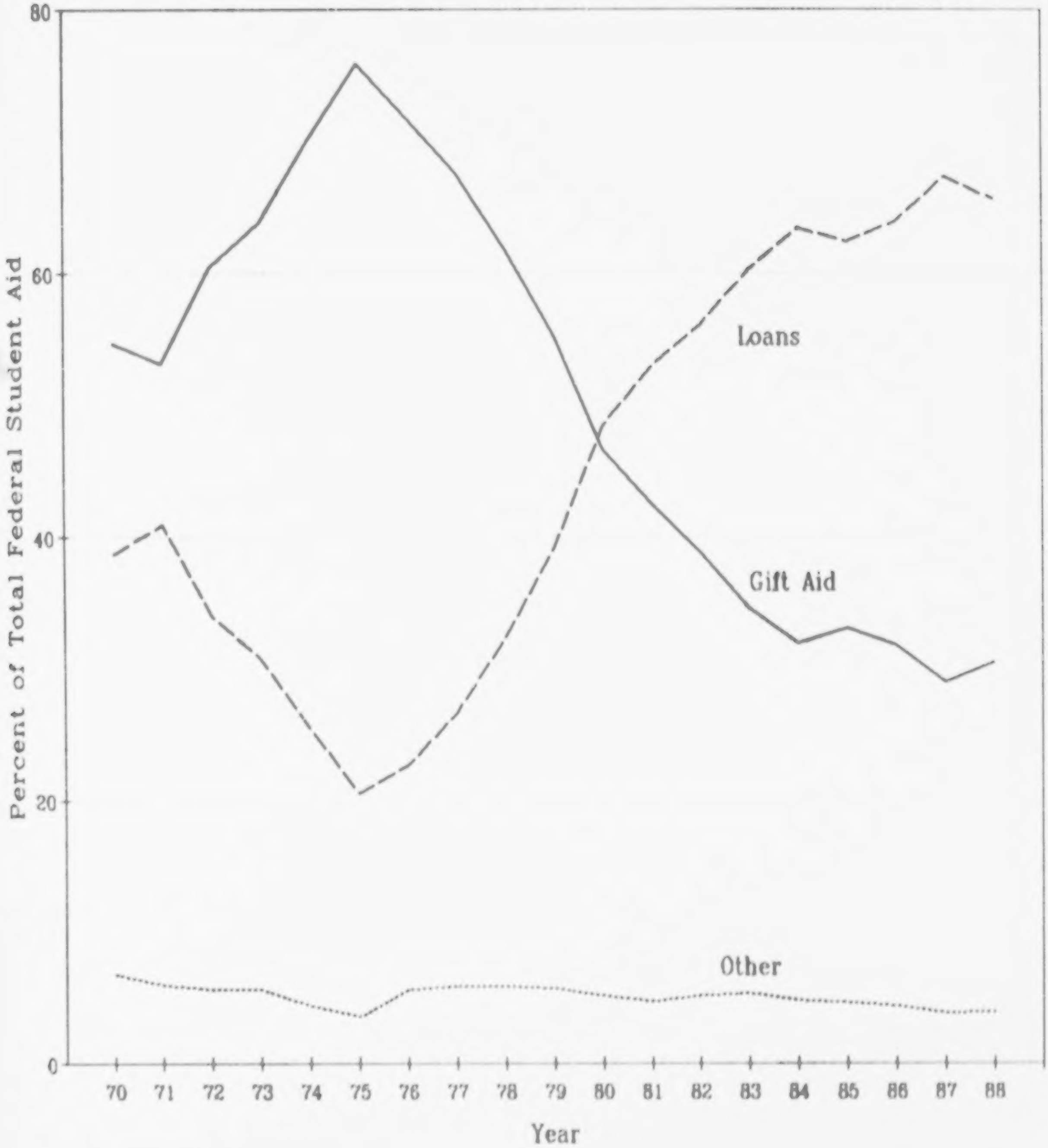
Student financial aid comes in three basic forms: gifts, loans, and employment. Gifts include scholarships, grants, and benefits. Gift aid does not require repayment, but does require qualification. Loans must be repaid following college, along with interest, and in some cases loan processing fees as well. Employment includes federal, state, and institutional programs of working while studying for the purpose of financing college attendance costs.[a]

Federal student aid includes all three types, but federal emphasis on each aid type has depended on time, purpose, and program. Since 1970, the federal government has moved in different directions, toward need-tested grants in the first half of the 1970s and toward guaranteed student loans in the second half of the 1970s. After 1980, more federal aid was awarded through loans than in the form of gift aid. This shift is highlighted in Figure 1, which shows the distribution of federal student aid by type between 1970 and 1988.

For the purpose of this study, we are particularly interested in the effects of substituting loans for gift aid on the low income population, for which the Educational Opportunity Grants were designed in 1965 and the Basic Educational Opportunity Grants were designed and added in 1972. Since 1975, the average annual increase in the Pell Grant maximum for which the poorest applicants could qualify has been about $60 per year. During this same period of time, the average annual increase in costs of attendance faced by such students at public colleges has been about $300 per year, and at private colleges about $600 per year. As a result, as the purchasing power of available grant assistance has diminished, students with financial need have had to rely increasingly on student loans to finance college attendance costs.

[a] Every major federal student financial aid program has experienced a name change since its inception. Within the grant and loan programs that are the focus of this paper, we refer to the following. The original Educational Opportunity Grant Program created in the 1965 Higher Education Act became the Supplemental Educational Opportunity Grant Program (SEOG) in the 1972 Amendments and is still known by that name. The Basic Educational Opportunity Grant Program (BEOG) created in the 1972 Education Amendments became the Pell Grant Program in 1981, and is referred to as Pell in this paper. The original campus-based National Defense Student Loan Program (NDSL) was created in 1958. It was later renamed the National Direct Student Loan Program, and more recently again renamed the Perkins Loan Program. The federally Guaranteed Student Loan Program (GSL) was created in the 1965 Higher Education Act. The core program is now known as the Stafford Student Loan Program. The apparent success and problems of the original program have produced a new generation of offspring including Supplemental Loans for Students (SLS), and Parent Loans for Undergraduates (PLUS). This paper treats all grant programs as one, and all loan programs as one. The differences between the several grant and loan programs are not consequential in this paper.

FIGURE 1
DISTRIBUTION OF FEDERAL STUDENT AID BY PROGRAM TYPE
1970 TO 1988



Source: Trends in Student Aid, The College Board.

Sources and Types of Student Aid by Income Level

Most of data on undergraduate use of loans to finance educational attendance costs are not useful for our examination of student borrowing, either because loan recipient data are not reported by income level, or because the data are not available for the relevant time period. The least problematic national data file is produced through the National College Freshmen Norms surveys, published by the American Council on Education and the University of California at Los Angeles. This file permits us to examine whether or not college freshmen are using particular types of financial aid, although it is less useful in identifying the amounts of aid received.

We have examined sources of student financial aid for college freshmen stratified by family income levels for the years 1978 through 1986. Family incomes are grouped by level: at or below the poverty level, 101 percent to 200 percent of the poverty level, and 201 percent or more of the poverty level. We will call these three groups poverty income, modest income, and comfortable income respectively. Figures 2 through 4 summarize, for the period 1978 to 1986, the proportion of each group receiving financial assistance from family (parents and student), gifts (federal, state, institutional grants and scholarships), and loans (mainly federal).

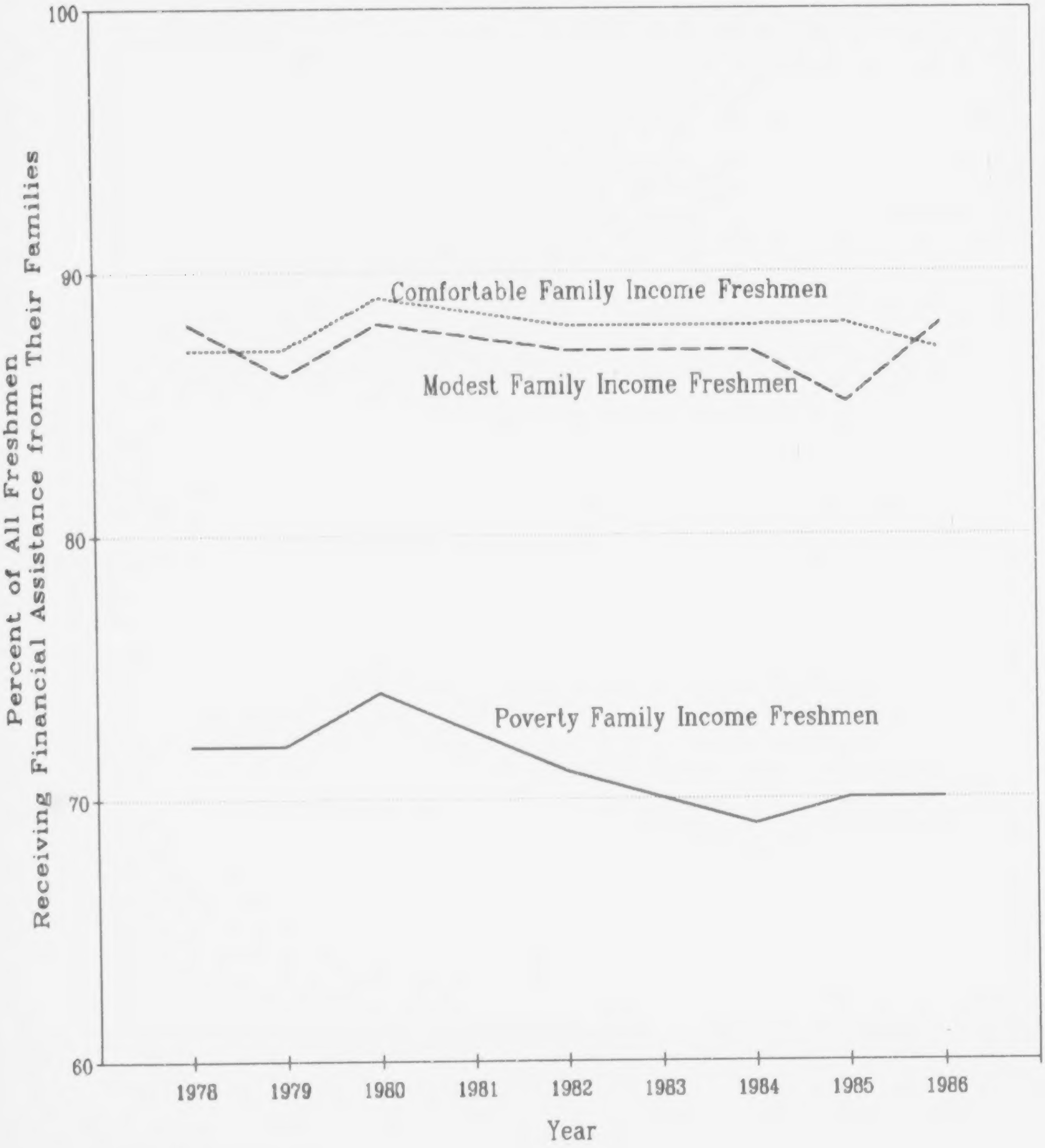
Family financial assistance. Figure 2 shows the proportion of freshmen receiving at least some assistance through their families. Family assistance includes parents, own savings, and employment. Of the freshmen from modest income and comfortable families, 85 to 89 percent receive assistance from their families or through their own employment or savings, compared to 69 to 74 percent of those from poverty level families. While the proportion of modest and comfortable family income freshmen receiving assistance from their families or themselves has remained stable between 1978 and 1986, the proportion of freshmen from poverty family income reporting family assistance has declined, most notably between 1980 and 1984.

The sources of family financial assistance for college freshmen differ by family income level. About half of those from poverty family income levels receive financial support from their parents, compared to 70 percent of those from modest family incomes and nearly 80 percent of those from comfortable family income backgrounds. About 40 percent of the poverty level freshmen use their own savings, compared to 58 percent of those from modest family incomes and about 55 percent of those from comfortable families. About 35 percent of poverty level students use earnings from employment to finance college, compared to 50 percent of freshmen from modest family incomes and 33 percent of freshmen from comfortable families. Between 1978 and 1986, there were no strong trends in any of these data.

Gift assistance. The proportion of college freshmen receiving gift aid by family income level is shown in Figure 3. Interestingly, the poorest freshmen--those from poverty level family income backgrounds--are less likely to report having received any grants or scholarships than are freshmen from modest family income backgrounds.

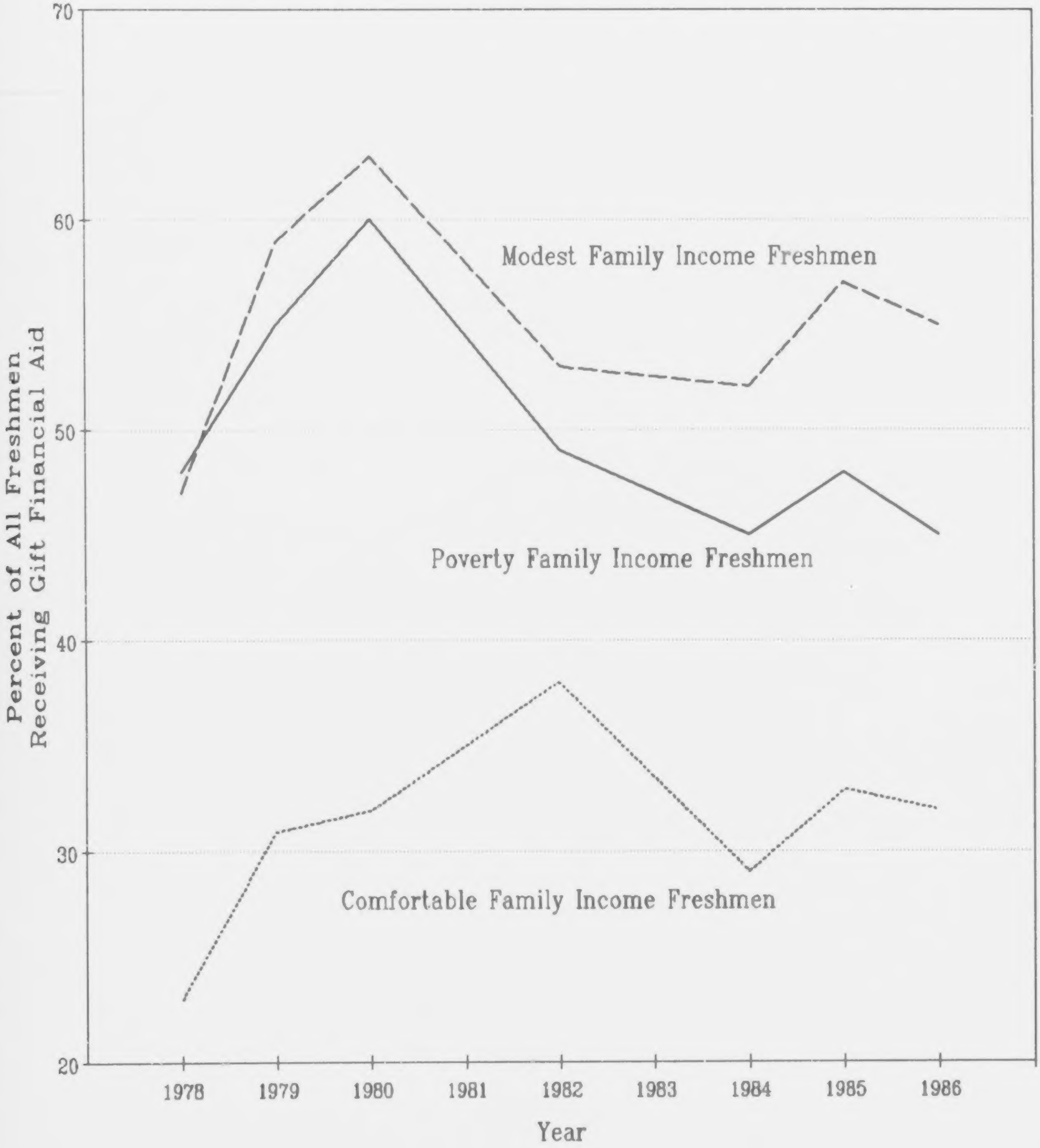
But most interesting of all is this: between 1980 and 1986, the proportion of college freshmen from poverty family incomes reporting having

FIGURE 2
FAMILY FINANCIAL SUPPORT FOR AMERICAN COLLEGE FRESHMEN 1978 TO 1986



Source: National College Freshmen Norms.

FIGURE 3
GIFT AID
FOR AMERICAN COLLEGE FRESHMEN
1978 TO 1986



Source: National College Freshmen Norms.

received gift aid fell by 15 percent, from 60 percent of all freshmen to 45 percent in six years. The proportion of freshmen from modest family income backgrounds that received gift aid declined by 8 percent, from 63 to 55 percent during this same time period. And the proportion of freshmen from comfortable family income backgrounds reporting gift aid held constant at 32 percent. The group experiencing the greatest reduction in gift aid eligibility between 1980 and 1986 was the poorest group--freshmen from poverty level family income backgrounds.

We have examined gift aid use by program as well. Among college freshmen from poverty level family income backgrounds, the proportion reporting having received a Pell Grant declined from 49 percent in 1980 to 34 percent by 1986--a 15 percent decrease. For this same income group, SEOG use dropped by 6 percent, state scholarships/grants by 6 percent, and college grants increased by 2 percent. The finding regarding use of Pell Grants is particularly troubling because all full-time, first-time college freshmen from poverty level backgrounds should have qualified for maximum Pell Grants if they had applied for any need-tested grant aid during this period.

Among freshmen from modest family income backgrounds--101 to 200 percent of the federal poverty level--similar trends prevailed. The proportion of freshmen receiving Pell Grants declined from 44 percent in 1980, to 28 percent by 1986--a decline of 16 percent. The proportion of modest family income freshmen reporting SEOGs declined by 2 percent, and state scholarships or grants declined by 5 percent. The proportion reporting college grants increased by 7 percent.

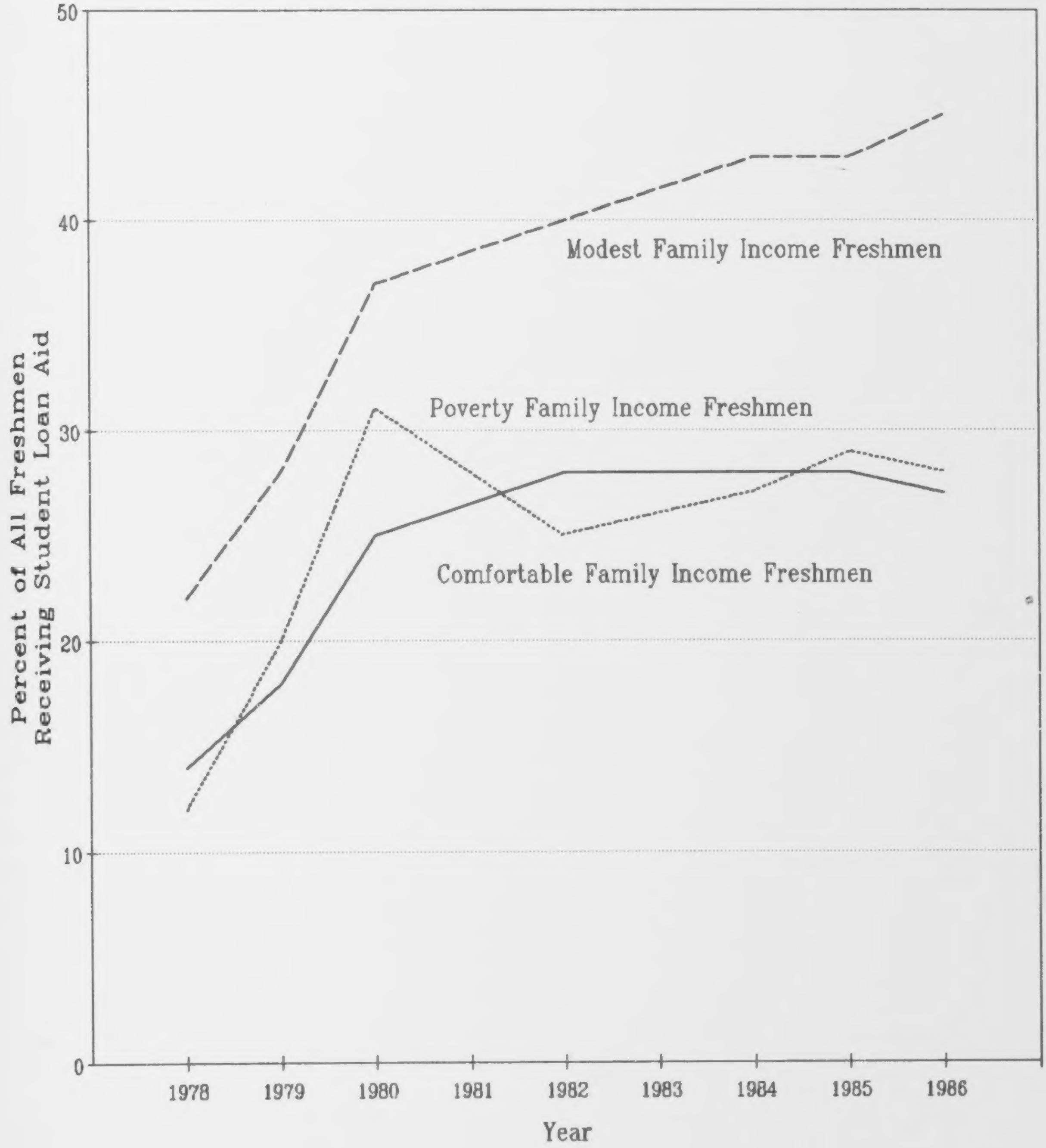
Among freshmen from comfortable family income backgrounds--more than 200 percent of the federal poverty level--the use of Pell Grants has declined by 5 percent, SEOG use has declined by 1 percent, and use of state scholarships and grants has not changed. College-awarded grants to well-off students has increased by 6 percent between 1980 and 1986.

Loan assistance. While loans have become more widely used by freshmen to finance their higher educations, not all income groups have shared in this expanded use of loans. As shown in Figure 4, the greatest growth in the use of loans has been among modest income freshmen, followed by poverty income freshmen. The proportion of comfortable family income freshmen reporting loan use declined between 1980 and 1986.

The growth in student loan use has occurred exclusively through the federal Stafford Student Loan Program. Among freshmen from poverty level family income backgrounds, the rate of Stafford Loan use increased from 14 to 21 percent between 1980 and 1986--an increase of 7 percent. Among modest family income freshmen, loan use increased by 15 percent, from 21 to 36 percent. Among comfortable family income freshmen, loan use held constant at 21 percent during this same period.

In the above review of changes in the financial aid types received by freshmen from different family income backgrounds, we have examined financial aid awards for freshmen enrolled in higher education. However, during the period from 1980 to 1986, significant changes occurred in the access and choice behaviors of college freshmen from low family income backgrounds. We will review these changes in the next section.

FIGURE 4
STUDENT LOANS
FOR AMERICAN COLLEGE FRESHMEN
1978 TO 1986



Source: National College Freshmen Norms.

II. Behavioral Indications

As loans have come to replace grants in federal student aid programs, particularly for low income students, college enrollment patterns have changed. So too have Stafford Loan debt levels and default rates. In this section we examine these behavioral indicators by income level.

Trends in Higher Educational Participation by Family Income Level

Since the creation of need based student financial aid programs in the Higher Education Act of 1965, federal student financial aid has been focused on those who demonstrated financial need to be able to finance their higher educations. Moreover, the more financial need demonstrated, the larger the federal student aid eligibility and award. Thus, for twenty-five years most federal student financial aid has been targeted toward the needy, and the more needy the applicant the more aid he or she generally received. To a lesser but not inconsiderable extent, states have developed student financial aid programs using similar guidelines to assess need for state grants.

Financial need is the difference between college attendance costs and expected family contribution determined by need analysis. Many factors enter into the calculation of need, such as tuition, whether one lives on-or off-campus or at home, family size, and assets. But family income is one of the most important and--given the historical unwillingness of Congress to consider actual college attendance costs in its major grant program, the Pell Grant Program--probably the most important determinant of need.

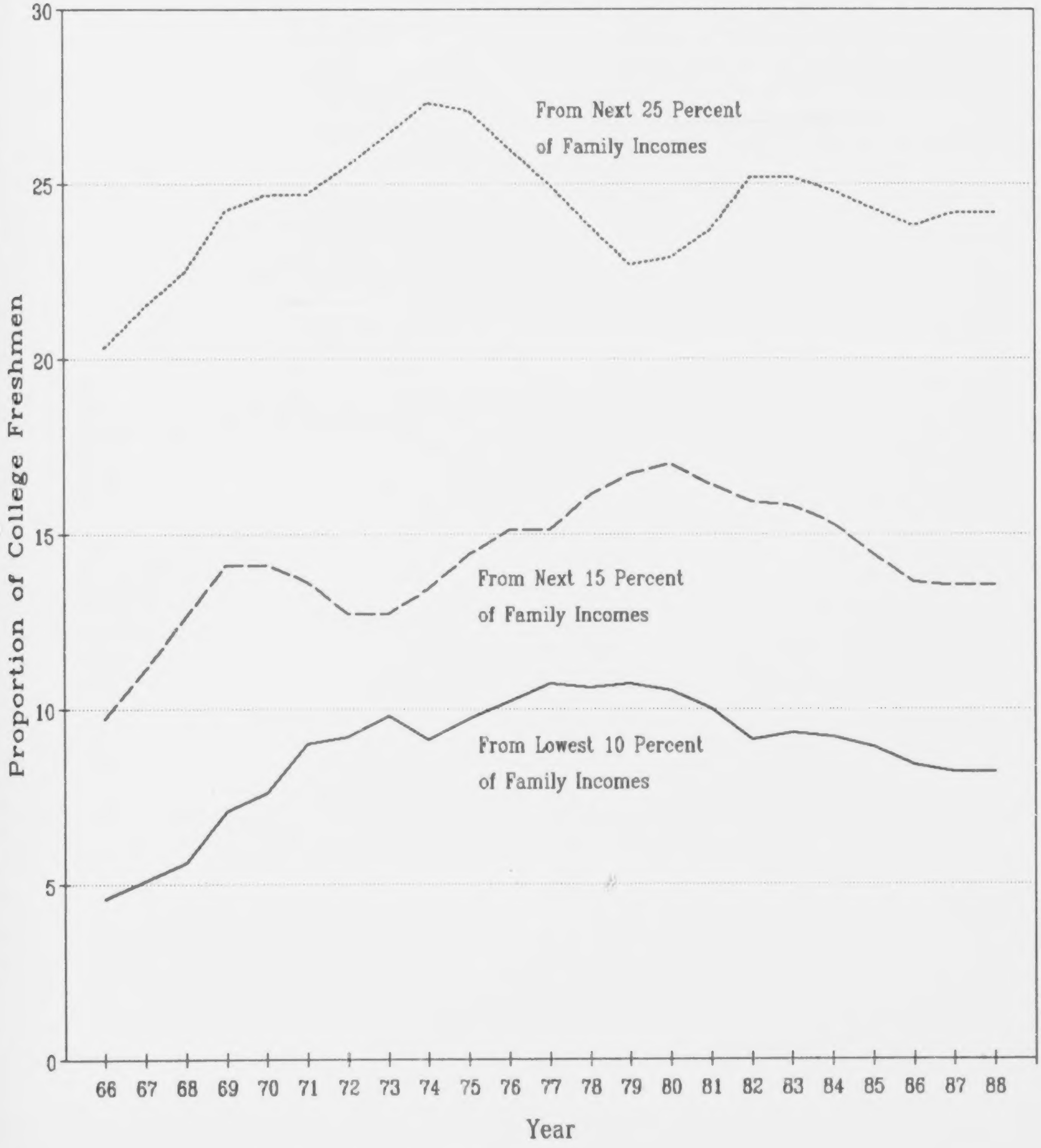
In Figure 5, data on family incomes from the Census Bureau and on family incomes of college freshmen from the annual survey of American college freshmen have been combined to illustrate college access trends by family income level between 1966 and 1988. This chart plots the college enrollment rates of freshmen from the lowest 10 percent of the family income range, along with the rates for freshmen from the next 15 percent and the next 25 percent of the family income distribution.

Bottom 10 percent. Students from the lowest 10 percent of the family income distribution constituted 4.6 percent of all college freshmen in 1966, immediately after passage of the Higher Education Act of 1965. Then, between 1966 and 1977, the proportion of college freshmen from the lowest 10 percent of the family income distribution increased steadily to 10.7 percent of all freshmen. During the decade following the signing of the Higher Education Act, the college entrance rate for this group increased by 133 percent.

Since 1979, however, these gains have been substantially eroded. By 1987 and 1988, students from the lowest 10 percent of the family income distribution had dropped to 8.2 percent of all freshmen. Put in other terms, 41 percent of the access gain made between 1966 and 1977 was lost between 1979 and 1987.

Next 15 percent. The trend in higher educational participation for students from families from the next 15 percent of the family income distribution is largely similar to that just described. Students from this

FIGURE 5
PROPORTIONAL REPRESENTATION OF COLLEGE FRESHMEN FROM DIFFERENT FAMILY INCOME RANGES
1966 TO 1988



Sources: Current Population Reports P-60 and National College Freshmen Norms

family income interval constituted 9.7 percent of all college freshmen in 1966. This proportion then increased to 17.0 percent by 1980, an increase of 75 percent in the college enrollment rate.

After 1980, these gains were eroded. By 1987 these students made up 13.5 percent of all college freshmen. That is to say, 48 percent of the college access gain made between 1966 and 1980 was lost between 1980 and 1987.

Next 25 percent. Again, we see fluctuations in college access rates for students from families whose incomes fell between the 25th percentile and median family income.[a] In 1966 the proportion of all college freshmen from this quartile was 20.3 percent. Their proportion grew to a peak of 27.3 percent in 1974, and has since declined to 23.8 percent by 1986 and 24.4 percent by 1988. The loss of enrollment share between 1974 and 1986 amounted to half of the gain achieved between 1966 and 1974.

This population in particular appears to have benefited from passage of the Middle Income Student Assistance Act of 1978. Between 1974 and 1979 their share of college freshmen enrollments declined from 27.3 to 22.7 percent. However, by 1982 and 1983 their share had risen to 25.2 percent of all freshmen. Since 1983 their share has declined, but only slightly.

The overall pattern described here for students from the bottom half of the family income distribution is one of substantial growth in higher educational participation between 1966 and the second half of the 1970s, followed by erosion of 40 to 50 percent of those gains during the 1980s. Because financial aid was designed to enhance the higher educational participation of lower income students, this loss is a profoundly troubling reflection on the performance of student financial aid programs during the 1980s.

Enrollment Redistribution

Beyond the college access issue identified in Figure 5 is the college choice question--or where students from different income backgrounds go to college. In the previous section we examined the participation of the poor in higher education; college access for the poor has clearly and sharply suffered during the 1980s. Here we examine data from several sources regarding college choice for economically disadvantaged and financial aid dependent populations.

Freshmen enrollment by institutional type and control. The National College Freshmen Norms collect data on college choice and enrollment decisions by income level and family size. From these data elements we can identify approximately which college freshmen fall below the federal poverty level, and their distribution and concentration across institutional control and type.[b] These data appear in Table 1.

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[a] Family income here refers to the incomes of families with heads age 35 to 54 years--those most likely to have college age children.

[b] The income intervals used in the NCFN survey do not match precisely the poverty thresholds for different family sizes. We have approximated this relationship to compile Table 1.

TABLE 1
Distribution of Poverty Level American College Freshmen by Level and Control of Institution
1978 to 1986

	1978	1979	1980	1982	1984	1985	1986
Two Year Colleges							
Public	37.4%	33.9%	32.0%	36.0%	34.8%	34.4%	39.7%
Private	2.9	3.0	3.4	4.9	6.1	4.7	4.6
Subtotal	40.3	36.9	35.4	40.9	40.9	39.1	44.3
Four Year Colleges							
Public	26.8	33.3	32.2	27.2	30.9	30.7	30.0
Private	14.4	14.4	15.2	13.6	15.9	15.3	16.1
Subtotal	41.2	47.7	47.4	40.8	46.8	46.0	46.1
Universities							
Public	13.1	12.3	12.1	15.6	9.6	11.2	7.3
Private	5.4	3.1	5.1	2.8	2.7	3.7	2.4
Subtotal	18.5	15.4	17.1	18.4	13.3	14.9	9.7
Public	77.3	79.6	76.3	78.8	75.3	76.3	76.9
Private	22.7	20.4	23.7	21.2	24.7	23.7	23.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: ACT tabulations from National College Freshmen Norms data files.

The major finding from Table 1 is the reduction in the proportion of poverty family income background freshmen enrolled in universities, both public and private, between 1978 and 1986. Between 1982 and 1986, the proportion of poverty level freshmen enrolled in public universities declined by nearly half. Most of the decline in private universities occurred between 1978 and 1982, and in public universities between 1982 and 1986. Universities tend to have the highest tuition charges and most selective admissions policies. Concomitantly, freshmen from poverty family income backgrounds appear to have become more concentrated in two year colleges--the least expensive collegiate education.

The preceding finding of an increasing proportion of poor undergraduates moving out of senior colleges and into junior colleges is corroborated by three additional studies not detailed in this paper. However, because of the significance of this finding, they are described generally here.

Illinois financial aid applicants. Mortenson (1986) reported on the redistribution across institutional type and control of dependent Illinois state grant applicants classified by income levels over the period between 1979 and 1985. Below about $15,000 of family income (1978 dollars), public two-year colleges increased their market share of state grant applicants. This gain came from both public universities and private colleges and universities. Above about $20,000 of family income (1978 dollars), public universities gained in market share of Illinois state grant applicants. This gain came at the expense of private colleges and universities. In Illinois during the period from 1979 to 1985, the poorest students were shifting their enrollments to the least expensive institutions while more middle income grant applicants were shifting their enrollments from the most expensive institutions to similar but less costly public institutions.

Freshmen enrollment. Davis and Johns (1988) described changes in the patterns of a national sample of low income college freshmen enrollment by institutional type and control at five year intervals between 1966 and 1986. A part of their study examined the proportion of freshmen enrolled from the bottom quartile of the family income distribution in eight different types and controls of American colleges. In all eight institutional types, the proportion of freshmen enrolled from the bottom quartile of the family income distribution increased between 1966 and 1981, and dropped between 1981 and 1986. However, the decline in the proportion of bottom quartile freshmen enrolled was least in public two-year colleges, private universities, and independent four-year colleges. The decline in bottom family income quartile freshmen enrollments was greatest among private two-year colleges, and public, protestant, and Catholic four-year colleges.

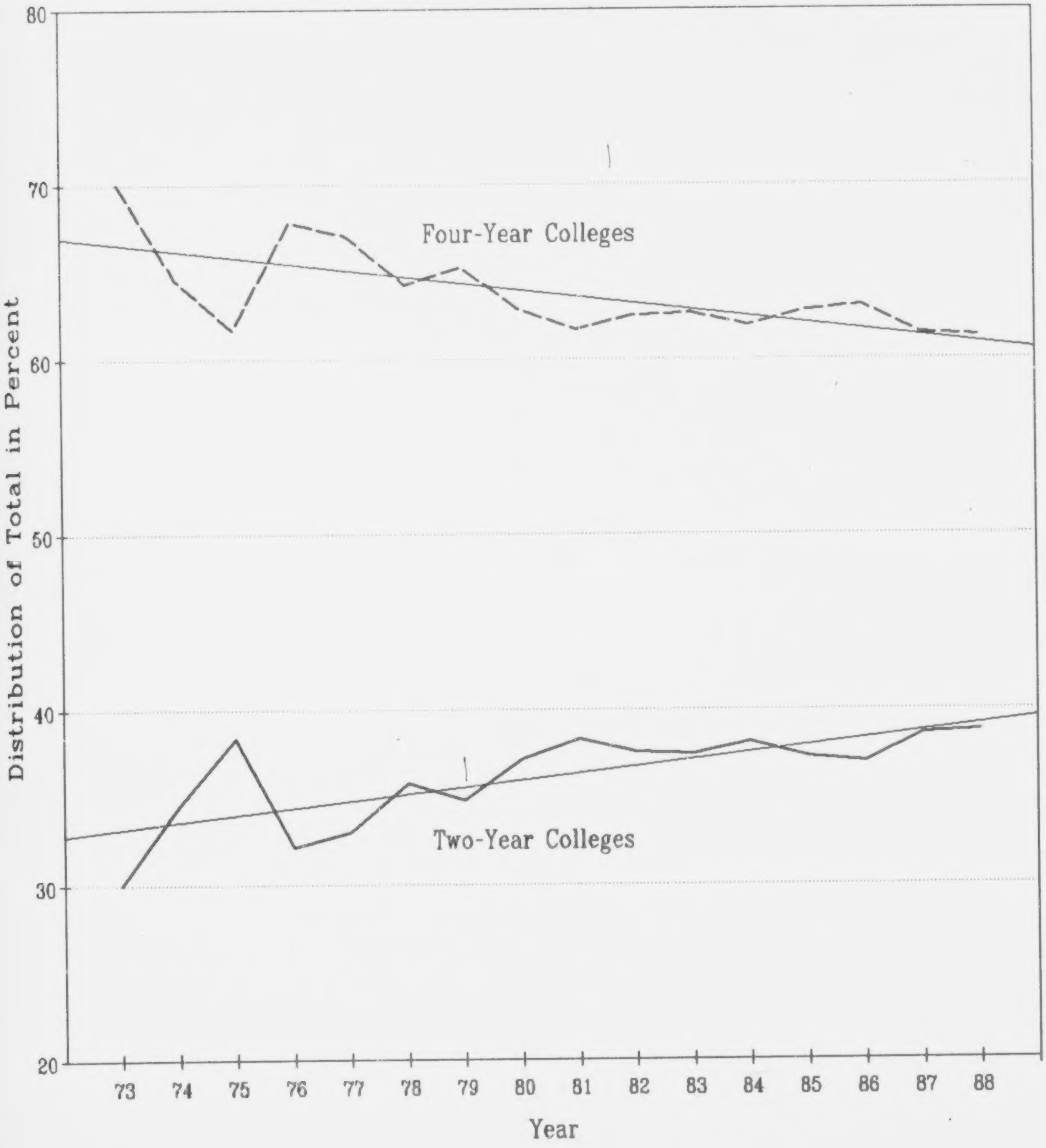
Undergraduates 18 to 24 years old. We have examined the distribution across institutional types of 18 to 24 year old undergraduate enrollments by family income for the years 1973 to 1986 from the Current Population Survey. These data are charted in Figures 6 and 7. Figure 6, for the first quartile of the family income distribution, shows growth in enrollment share in two-year colleges, and a decline in enrollment share of first quartile family income undergraduates in four-year colleges. A nearly identical pattern appears in Figure 7 for undergraduates from the second quartile of the family income distribution. The Current Population Survey data indicates a long term trend of low income enrollment shift out of senior colleges and into junior colleges.

These four studies of enrollment redistribution by income level support the finding that students from low family income backgrounds have become increasingly concentrated in public two-year colleges during the 1980s. This shift appears to have come mainly from public senior colleges, although the results on this point are not entirely consistent. Part of this inconsistency appears to be due to nomenclature problems.

Debt by Income Levels

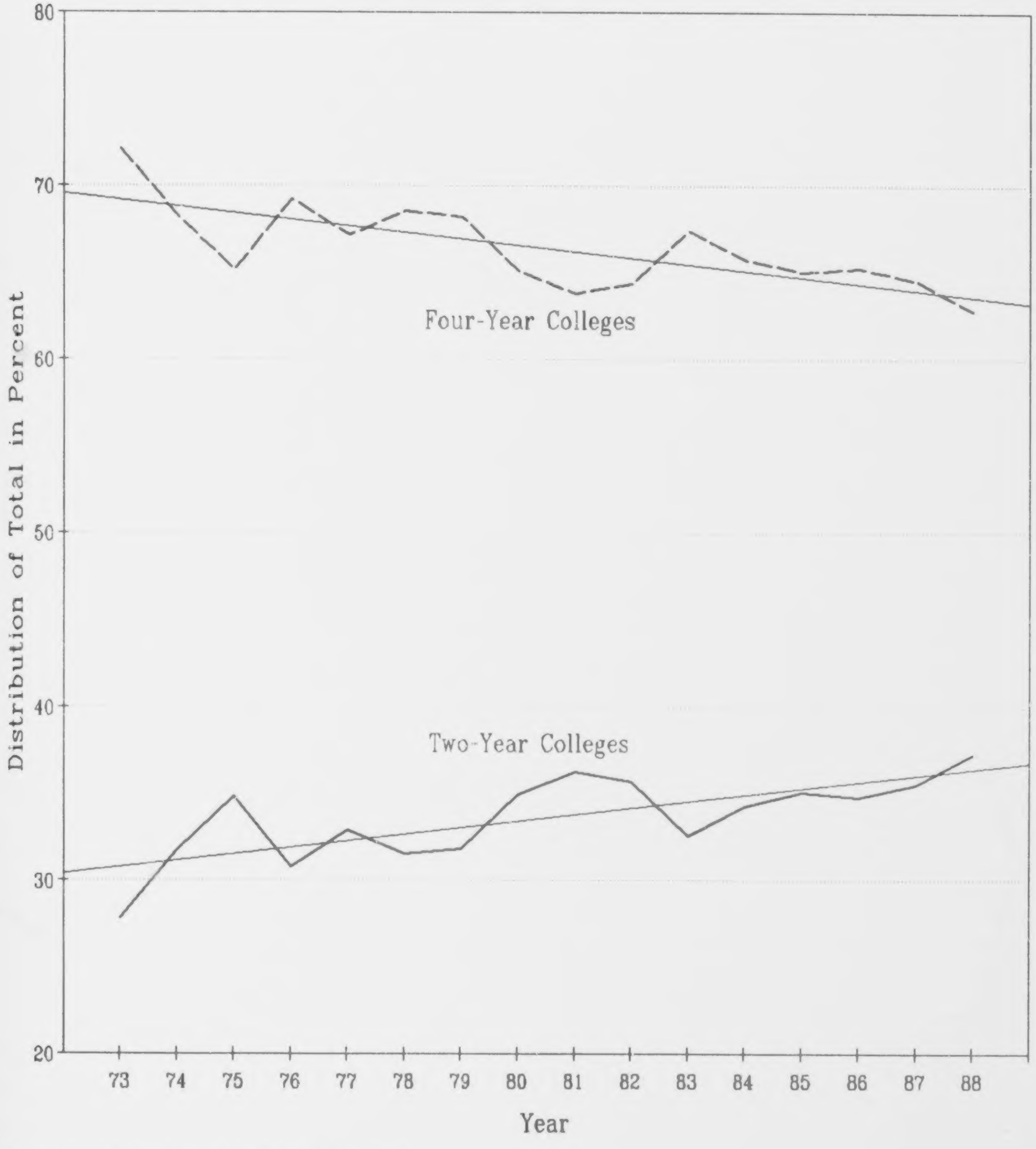
The Pennsylvania Higher Education Assistance Agency (PHEAA) has monitored cumulative Stafford Student Loan debt burdens of students enrolled in Pennsylvania postsecondary institutions. In PHEAA's most recent study, cumulative debt data by family income level and school type were compiled for 1988-89 undergraduates; these data are shown in Figure 8. The first significant finding in the PHEAA data is that cumulative debt levels are higher among lower income borrowers than they are among higher income borrowers in all four types of higher educational institutional institutions. That is, students from poorer families have borrowed more than students from higher family income backgrounds. Note that this has occurred when the higher educational participation of students from low family income backgrounds has dropped off

FIGURE 6
ENROLLMENT DISTRIBUTION OF 18 TO 24 YEAR OLD UNDERGRADUATES FROM THE FIRST QUARTILE OF FAMILY INCOME OF ENROLLED STUDENTS BY TYPE OF INSTITUTION, 1973 TO 1988



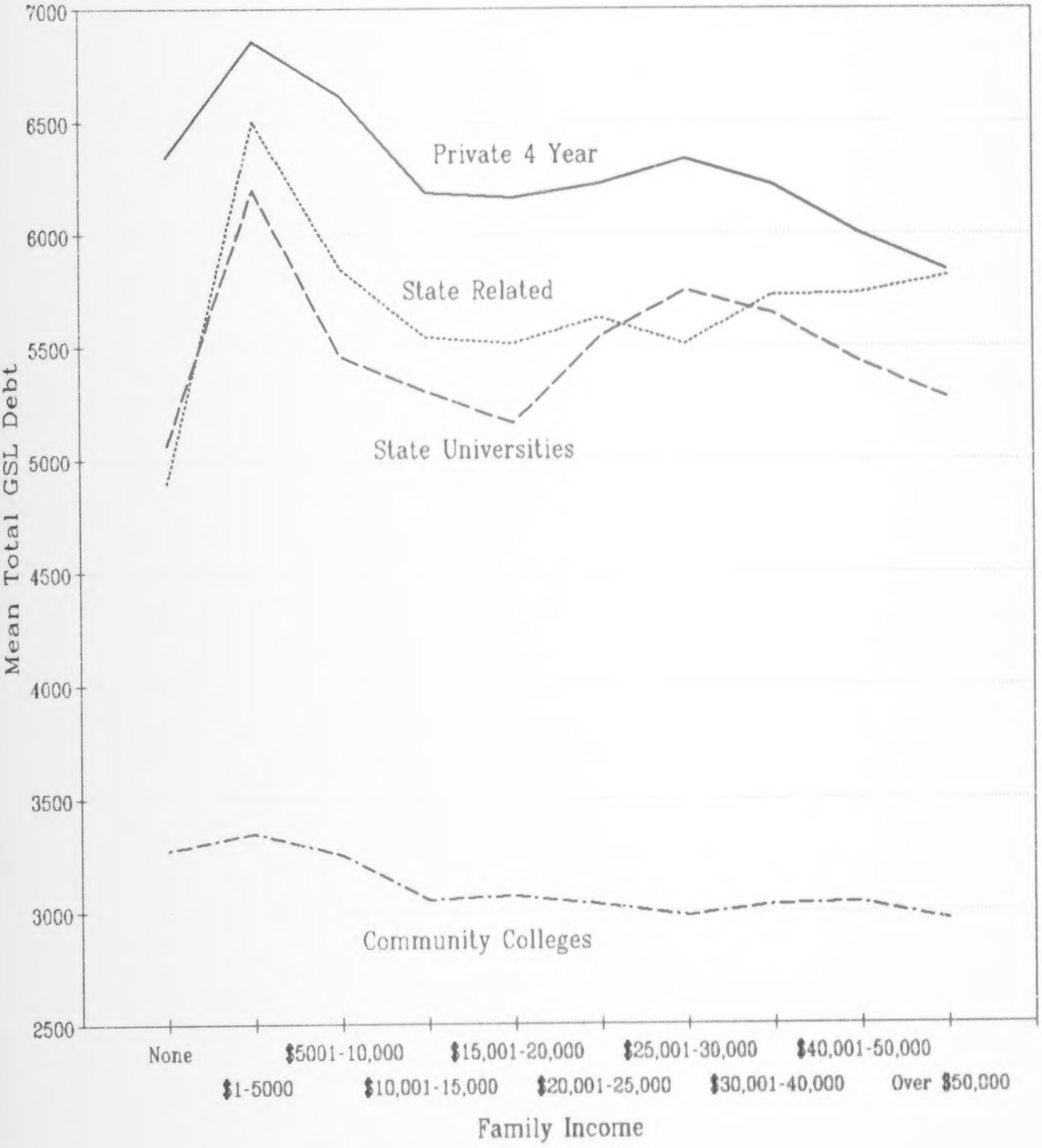
Source: Current Population Survey, Series P-20, annual.

FIGURE 7
ENROLLMENT DISTRIBUTION OF 18 TO 24 YEAR OLD UNDERGRADUATES FROM THE SECOND QUARTILE OF FAMILY INCOME OF ENROLLED STUDENTS BY TYPE OF INSTITUTION, 1973 TO 1988



Source: Current Population Survey, Series P-20, annual.

FIGURE 8
MEAN GUARANTEED STUDENT LOAN INDEBTEDNESS FOR UNDERGRADUATES BY FAMILY INCOME AND INSTITUTIONAL TYPE
1988-89



Source: Pennsylvania Higher Education Assistance Agency.

sharply from the levels reached during the late 1970s. The declining portion of this population that has actually enrolled in higher education has had to assume greater levels of educational debt to be able to do so.

However, the higher debt levels among poorer students is a recent phenomenon. A comparison of debt for 1988-89 with 1983-84 shows that most of the growth in debt levels has occurred among lowest income borrowers. As shown in Figure 9 for private four-year colleges in Pennsylvania, in 1983-84 cumulative debt levels were lowest for the poorest students, and highest for those from the most comfortable families. This situation was reversed by 1988-89. For example, in the $5001 to $10,000 income range, cumulative debt increased from $5147 to $6615, an increase of $1468 or 29 percent. However, above $50,000 income, debt decreased from $6723 to $5838, or a decrease of $885 or 13 percent.

The cumulative debt burdens by family income levels for 1983-84 and 1988-89 for Pennsylvania state universities, state related colleges, community colleges, and proprietary schools are shown in Figures 10 through 13. In each case except the last, the general pattern of Figure 9 prevails--greatest cumulative debt shifted from the most comfortable to the poorest students during this five year period. The greatest growth in debt occurred among the poorest loan recipients.

For all institutional types combined, Figure 14 shows the growth in cumulative debt by family income level. Between 1983-84 and 1988-89, debt growth was greatest in the family income interval of $5,001 to $10,000, a growth of $1,487. For students from families with incomes of more than $50,000 per year, debt actually declined by $283.

The declining purchasing power of federal grant assistance for the lowest income student aid applicants appears to have resulted in increased cumulative indebtedness for low income college students. In fact, increased indebtedness between 1983-84 and 1988-89 appears to have befallen primarily the lowest income students in higher education.

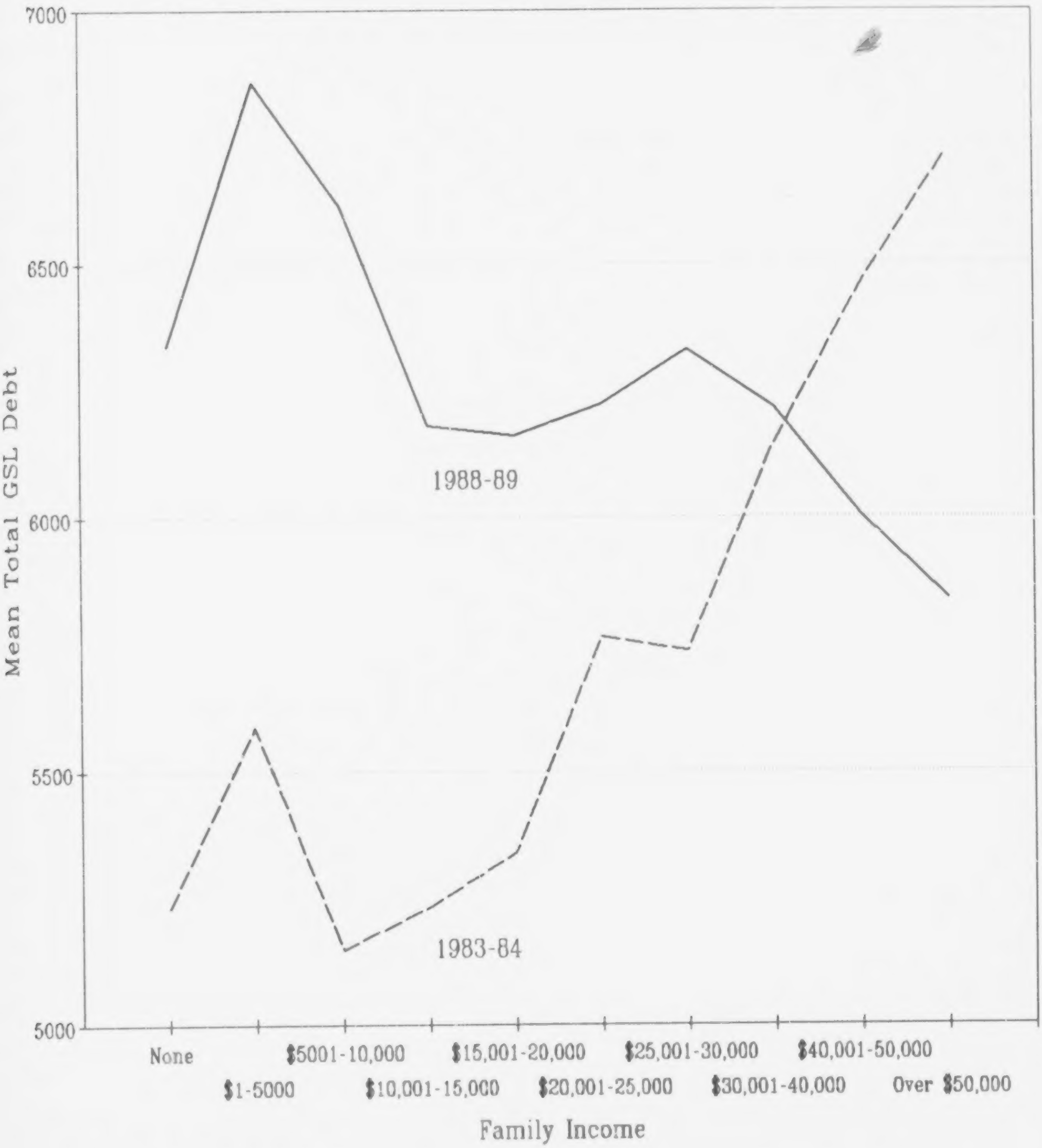
Default Rates by Family Income

Again, the Pennsylvania Higher Education Assistance Agency's analysis of its student borrowers provides us with especially valuable information on default probability by family income level. Figure 15 shows the relationship between income (adjusted gross income) and default rates for Pennsylvania undergraduate borrowers. These default rates were calculated for loans that reached maturity in the 1983-84 fiscal year and were in default by November of 1985.

Default rates in Figure 15 range from a high of 41.5 percent among borrowers with incomes of less than $6,000 to a low of 3.4 percent among borrowers with incomes of more than $42,000. That is, a borrower with an income of less than $6,000 per year was more than twelve times as likely to default on his than was a borrower with an income of more than $42,000 per year. This general pattern held up across all types of Pennsylvania institutions, including private four-year institutions, state universities, state-related colleges, junior and community colleges, nursing schools, vo-tech schools, proprietary schools, and out-of-state institutions.

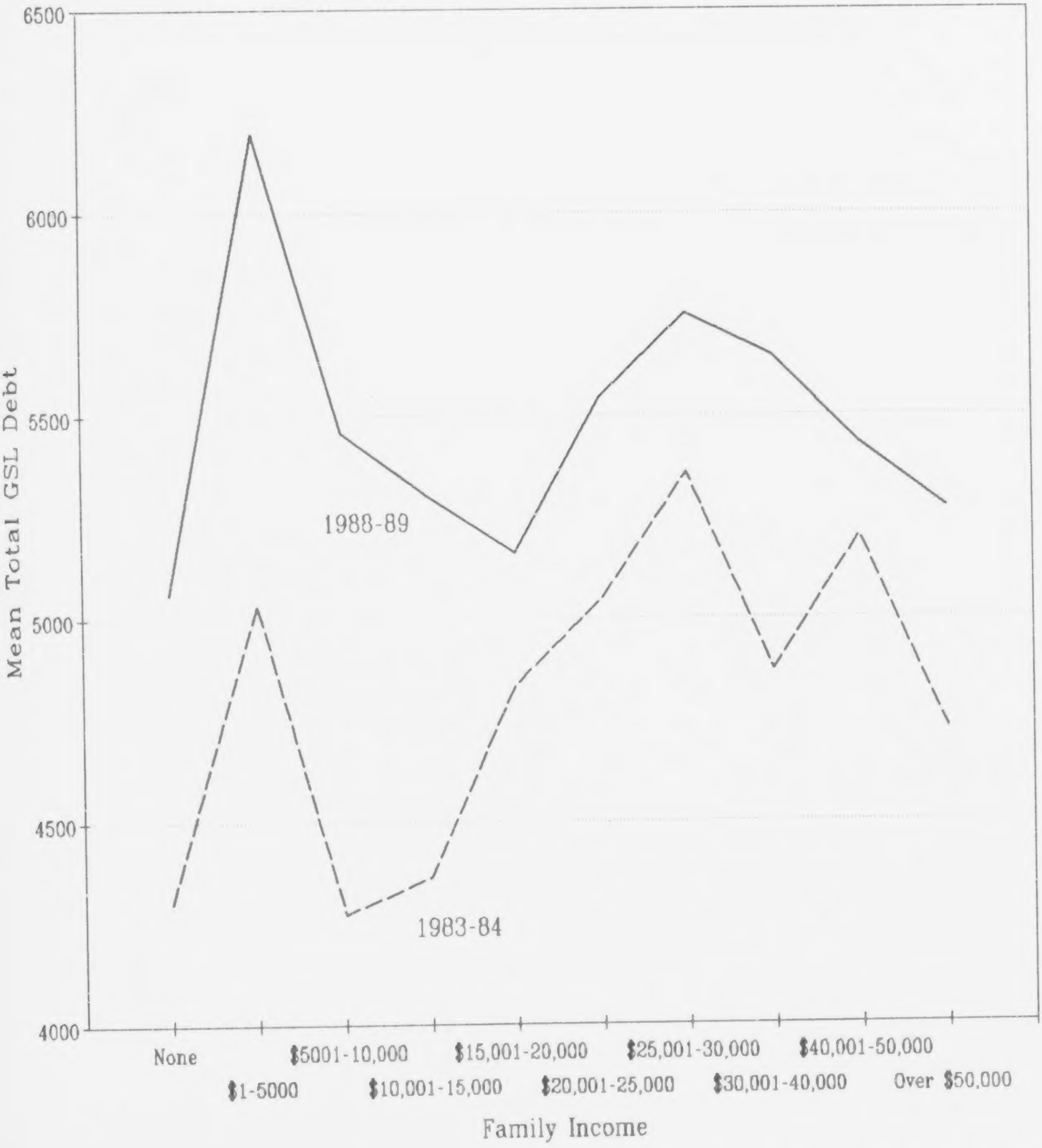
FIGURE 9

MEAN GUARANTEED STUDENT LOAN INDEBTEDNESS BY FAMILY INCOME FOR UNDERGRADUATES IN PENNSYLVANIA PRIVATE 4 YEAR COLLEGES 1983-84 AND 1988-89



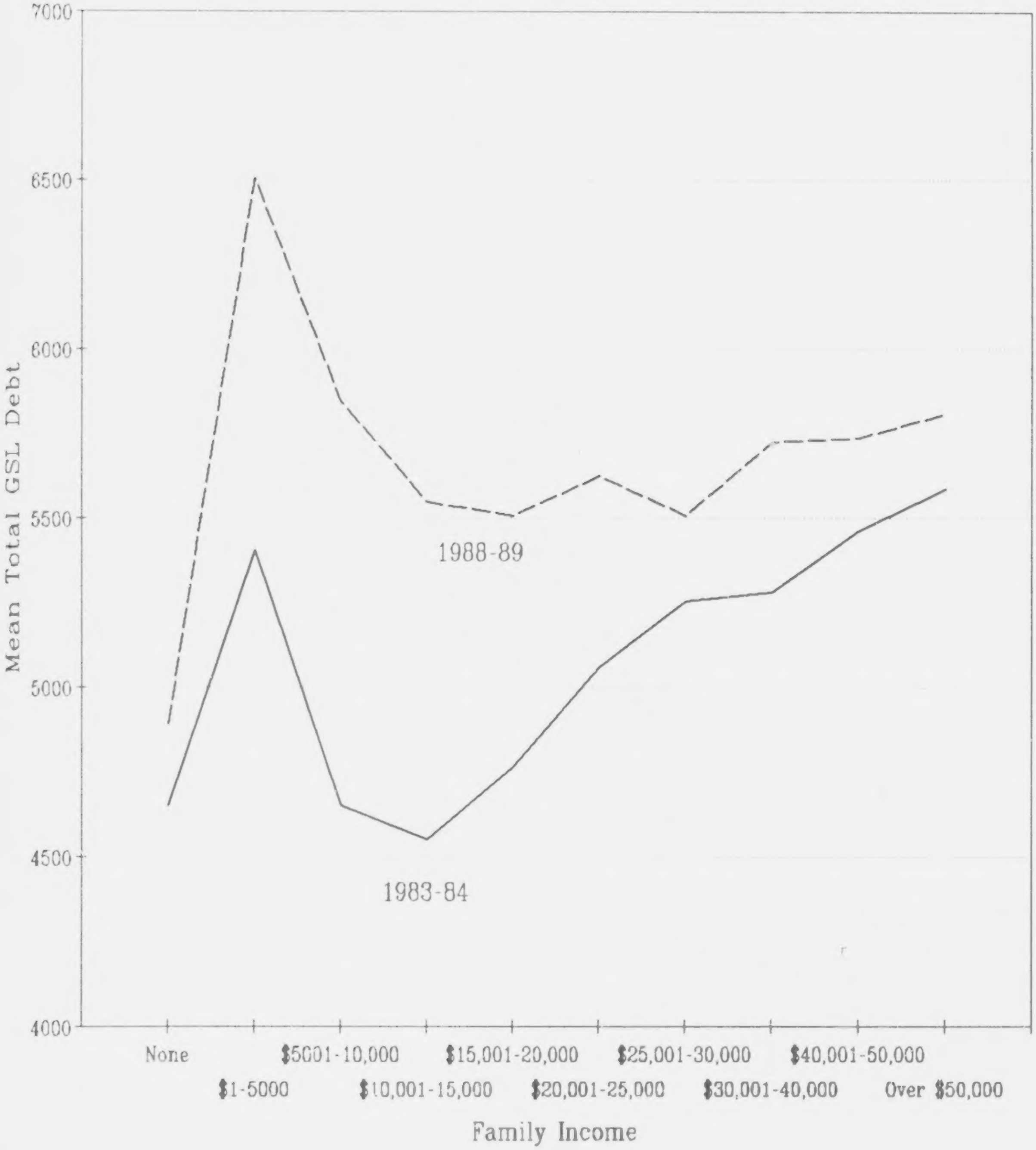
Source: Pennsylvania Higher Education Assistance Agency.

FIGURE 10
MEAN GUARANTEED STUDENT LOAN INDEBTEDNESS BY FAMILY INCOME FOR UNDERGRADUATES IN PENNSYLVANIA STATE UNIVERSITIES
1983-84 AND 1988-89



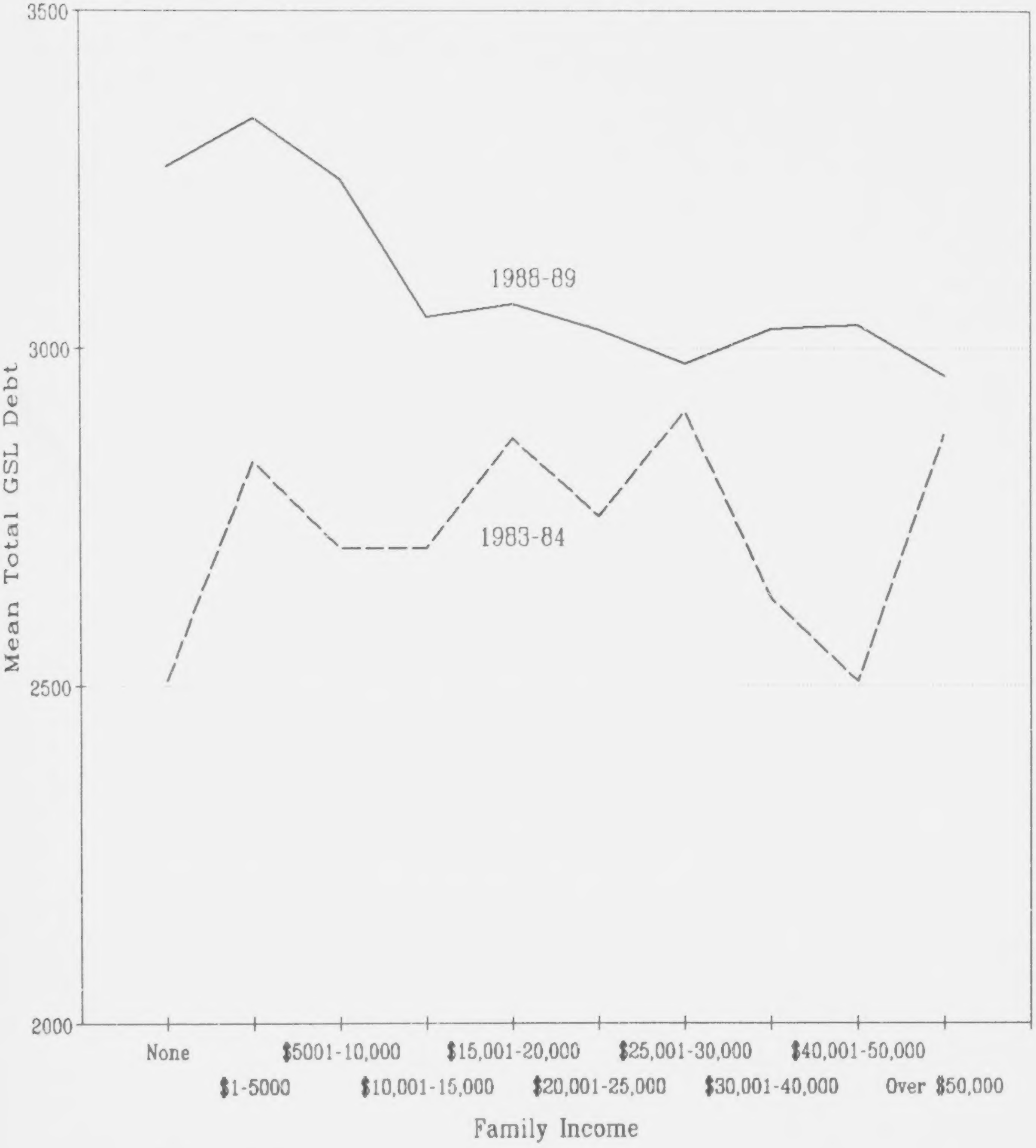
Source: Pennsylvania Higher Education Assistance Agency.

FIGURE 11
MEAN GUARANTEED STUDENT LOAN INDEBTEDNESS BY FAMILY INCOME FOR UNDERGRADUATES IN PENNSYLVANIA STATE RELATED COLLEGES
1983-84 AND 1988-89



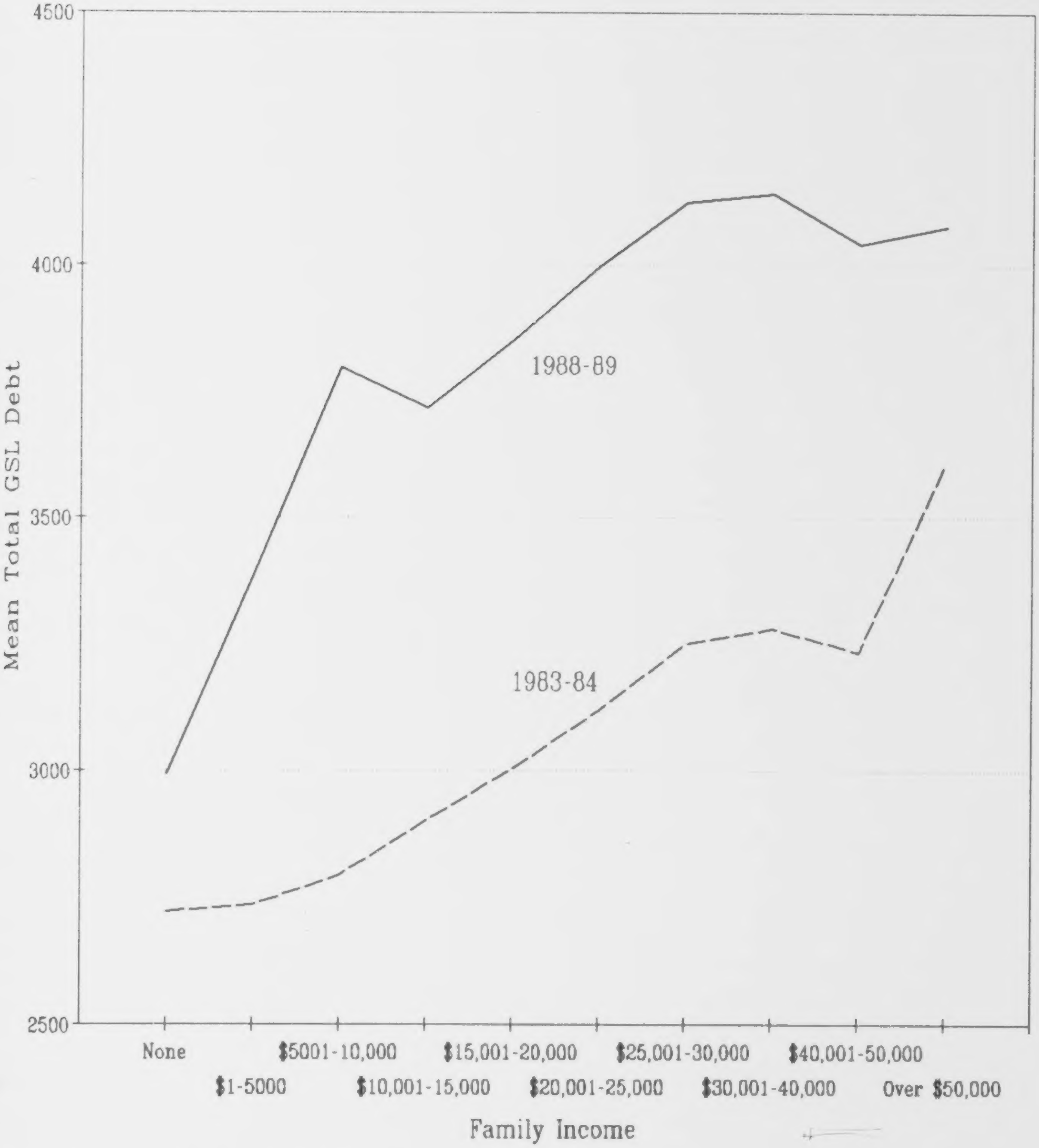
Source: Pennsylvania Higher Education Assistance Agency.

FIGURE 12
MEAN GUARANTEED STUDENT LOAN INDEBTEDNESS BY FAMILY INCOME FOR UNDERGRADUATES IN PENNSYLVANIA COMMUNITY COLLEGES 1983-84 AND 1988-89



Source: Pennsylvania Higher Education Assistance Agency.

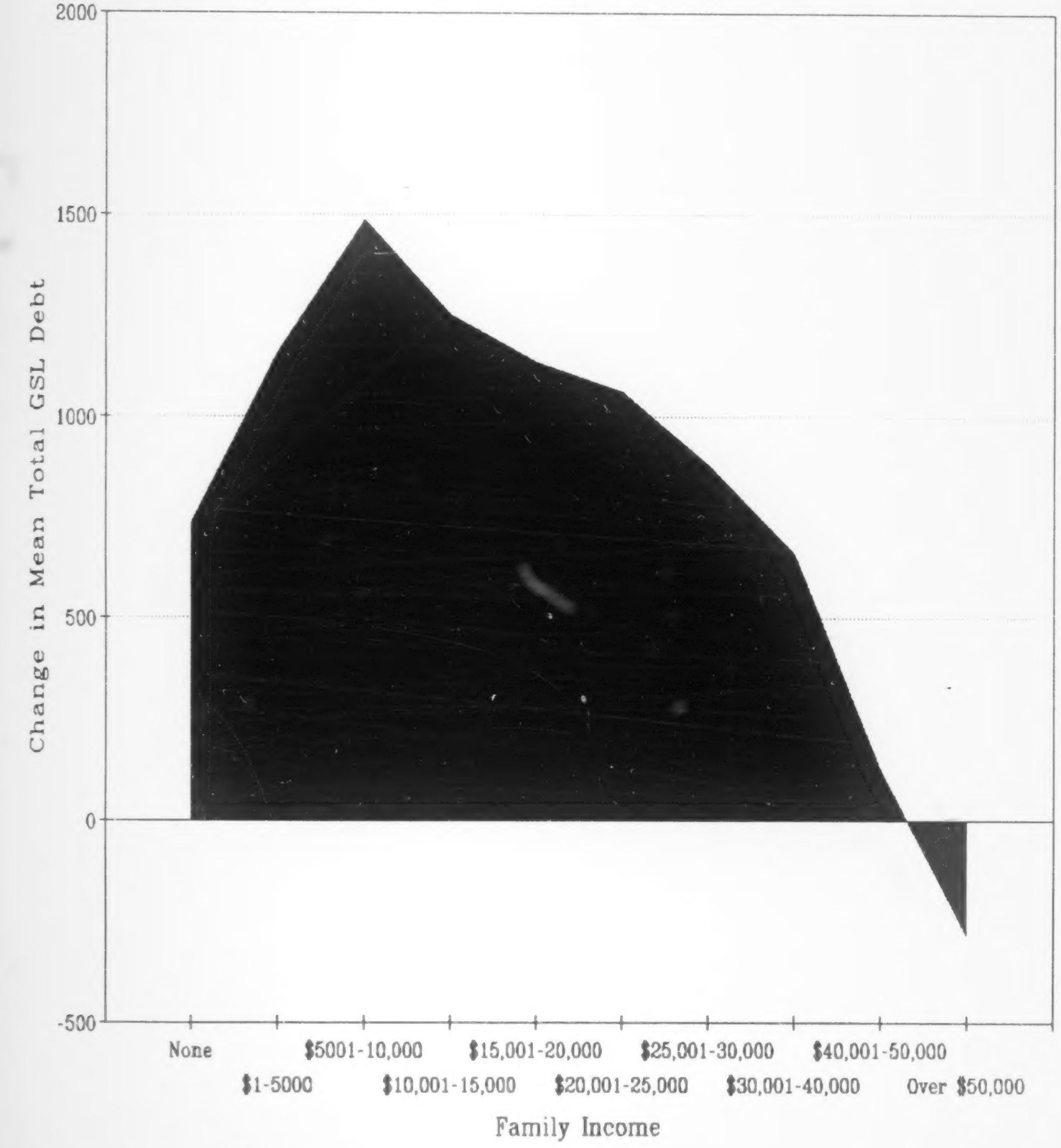
FIGURE 13
MEAN GUARANTEED STUDENT LOAN INDEBTEDNESS BY FAMILY INCOME FOR UNDERGRADUATES IN PENNSYLVANIA PROPRIETARY SCHOOLS 1983-84 AND 1988-89



Source: Pennsylvania Higher Education Assistance Agency.

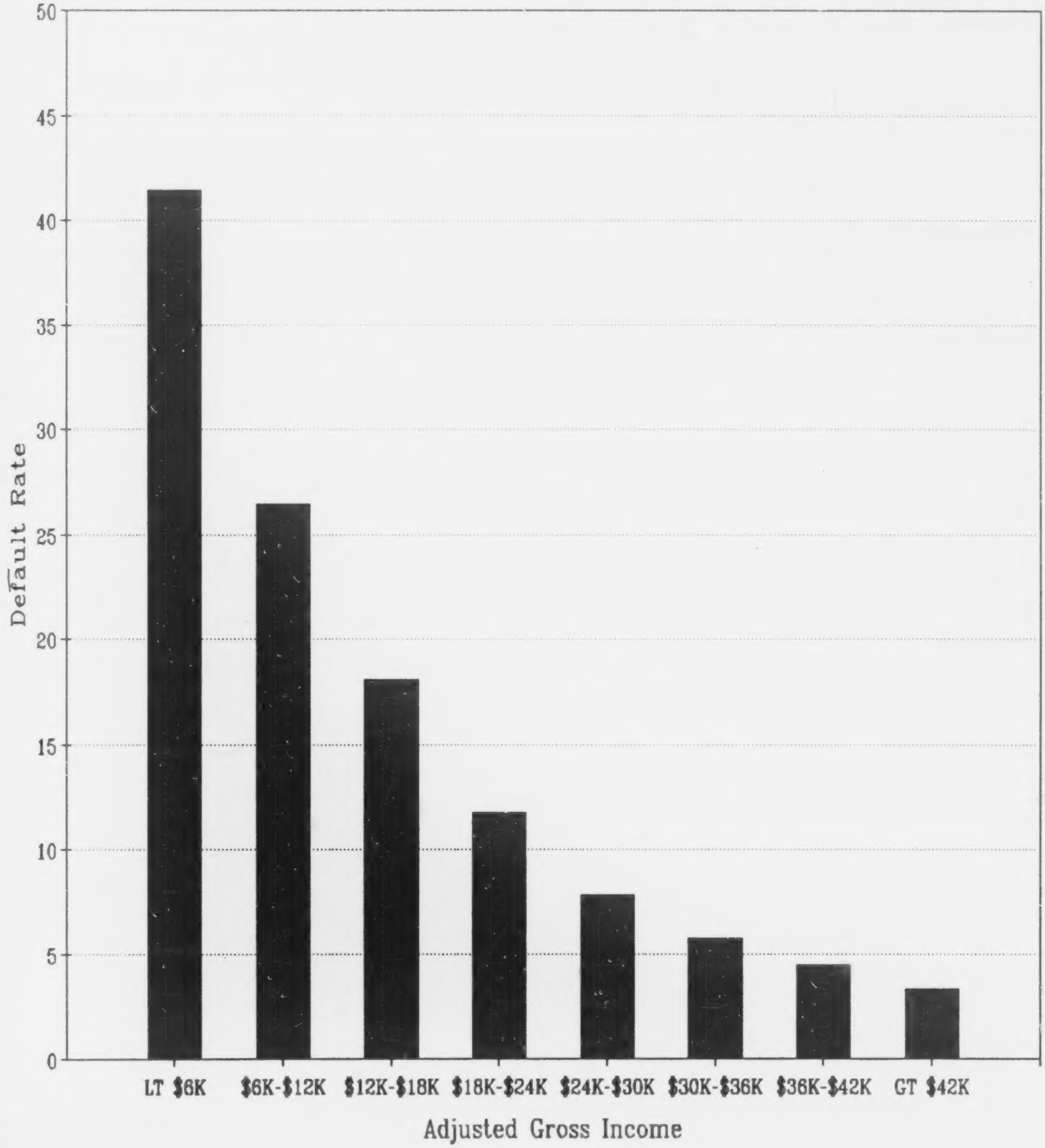
FIGURE 14

CHANGE IN MEAN GUARANTEED STUDENT LOAN INDEBTEDNESS BY FAMILY INCOME FOR UNDERGRADUATES IN PENNSYLVANIA BETWEEN 1983-84 AND 1988-89



Source: Pennsylvania Higher Education Assistance Agency.

FIGURE 15
DEFAULT RATES FOR GUARANTEED STUDENT LOANS BY INCOME OF THE BORROWER
1985



Source: Pennsylvania Higher Education Assistance Agency.

This finding--that lowest income borrowers have the highest probability of defaulting on their Stafford Student Loans--is supported by several other state and national studies.

In the next sections we examine and interpret these data from the perspectives of economic theory and attitudinal survey data.

III. Higher Education as an Investment

An investor seeking to maximize return on a potential investment evaluates choices by comparing benefits to costs for each alternative under consideration and then choosing the alternative that offers the greatest return on his investment. Similarly, a potential college student will make enrollment decisions regarding access, choice, and persistence based on an evaluation of the benefits and costs of the alternatives under consideration. To understand the enrollment decision-making context in which student loan costs of financing and risk occur, we first describe the economic investment model.

The Investment Model of Student Enrollment Behavior

A potential college student will pursue higher educational studies if the net benefits of attending college exceed the net benefits of alternative pursuits, such as immediate employment, military enlistment, etc. Net benefits are gross benefits minus costs. Both benefits and costs are discounted to present values at rates appropriate to the potential student. Benefits include both short term consumption benefits and long term investment returns. Costs include direct, indirect, opportunity, risk, and financing costs of attending college.

Intrinsic to this economic model of individual behavior are several axioms. Foremost among these are that individuals make decisions and take actions to enhance their private welfare. Second, pursuit of college enrollment is a matter of individual choice. And third, actual enrollment is contingent upon the availability of capacity in higher education that will accommodate the potential student's aspirations at the time, in the place, and in the form of programs and other services sought by the student.

Benefit-cost investment studies of the enrollment behavior of economically marginal students grew out of separate lines of inquiry pursued by economists. One line of inquiry examined price effects on student enrollment behavior; the other line examined labor market effects. The two approaches were then combined into a more powerful benefit-cost model.

However successful these merged lines of inquiry have been at explaining historical fluctuations in aggregate college enrollment behavior, the explanatory power of the economic investment model of student demand for higher education is dependent on the specification of the model's details including both benefits and costs. The benefits of higher education have been reported by others and are not the focus of this paper. Rather, we are concerned here with the specification of college attendance costs generally, and more specifically the risk and financing costs of educational loans when loans are used to finance collegiate study.

For the specific issue we are examining here, student loans, we focus on costs. Loans are considerably more costly than grants of a similar amount when used to finance college attendance costs. Loans are also more risky than grants because one must also consider the chances of earning greater income from a college education to be able to repay the educational loan. For many Americans, the greatly increased monetary returns on a college education since 1980 have justified the use of this more expensive aid form.

The above generalization is useful in examining enrollment decisions for aggregate enrollments. However, it tends to break down for certain subgroups within the population. Though the principles of economic investment still hold, the unique characteristics of vulnerable populations give different weights to benefit-cost factors involved in college enrollment decisions. For example, the substitution of loans for grants reduces the net benefits of attending college for those who take out student loans. This reduction occurs because financing and risk costs are added to the financial aid applicant's costs of college attendance, and no financial aid is provided to cover these costs. The greater the reliance on loans to finance college attendance costs, the greater the reduction in net benefits of college attendance.

Risk Costs

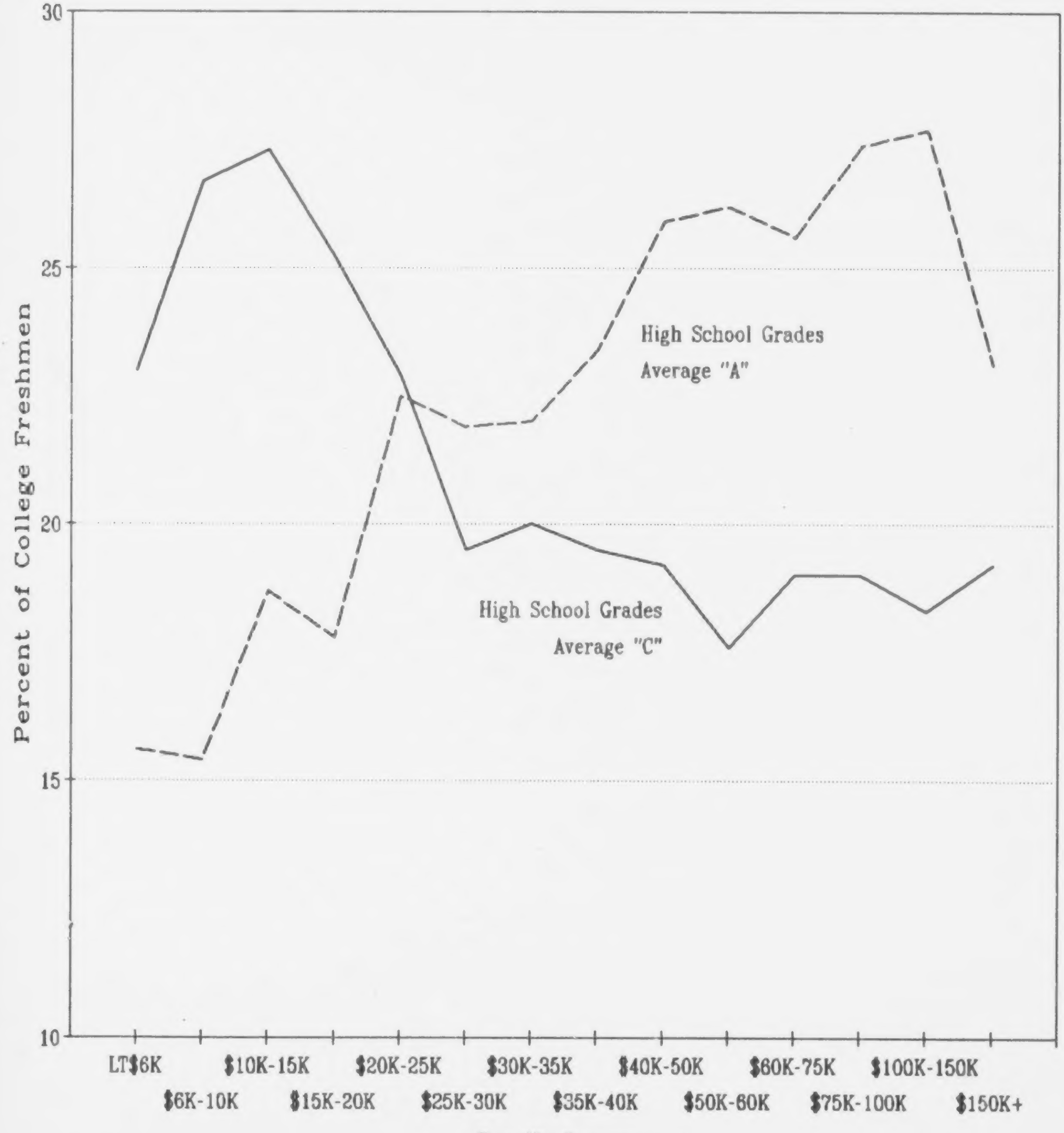
Abundant previous research has demonstrated strong, positive relationship between high school grades, test scores, and success in college (both grades and graduation). Those with lower high school grades and/or test scores are less likely to be successful in college. Similarly, those with lower high school grades and/or test scores are more likely to be from lower income backgrounds, require financial aid to help finance college attendance costs, and be required to take out educational loans as a part of that student aid package. In this manner, lower income college students incur financing and risk costs that diminish their net benefits of college attendance.

In the following charts, we illustrate the relationship between family income of young people and their high school grades and ACT Assessment test scores. The high school grade data are from the National College Freshmen Norms survey of first-time, full-time college freshmen for the fall of 1986. As shown in Figure 16, the proportion of college freshmen reporting high school grades of "A" increases from about 16 percent of those from family incomes below $10,000, to about 27 percent of those from families with incomes between $75,000 and $150,000 per year. Concurrently, the proportion of college freshmen reporting high school grade averages of "C" declined from about 27 percent of those with incomes of $6,000 to $15,000 per year to less than 20 percent with incomes above $25,000 per year.

Similarly, average ACT Assessment scores are strongly related to family income. As shown in Table 2, average ACT Composite scores in 1989 ranged from 14.2 for high school seniors from family incomes of less than $6,000 per year to 20.7 for high school seniors from families with incomes of $60,000 and over. Each $10,000 increase in family income adds about 1 standard score point to a student's ACT Composite score, on average.

Clearly, students from poorer family backgrounds approach higher education with lower probabilities of success (as measured by high school grades and ACT Assessment test scores) than do their more financially comfortable classmates. This increased risk adds to their college attendance costs when there is doubt about chances of graduating and earning increased incomes to be able to repay their student loans. Loans, uniquely, add this risk factor to the financially needy student's evaluation of the net benefits of college attendance. Grants impose no such consideration.

FIGURE 16
HIGH SCHOOL GRADES BY FAMILY INCOME FOR COLLEGE FRESHMEN
1986



Source: National College Freshmen Norms, CIRP.

TABLE 2
Mean ACT Composite Score by Family Income for College Bound High School Seniors
1986 to 1989

Family Income	1986	1987	1988	1989
Less than $6,000	14.6	14.7	14.6	14.2
$6,000-11,999	16.4	16.4	16.3	16.0
$12,000-17,999	17.7	17.6	17.5	17.2
$18,000-23,999	18.4	18.2	18.1	17.8
$24,000-29,999	18.9	18.7	18.6	18.4
$30,000-35,999	19.3	19.1	19.0	18.8
$36,000-41,999	19.7	19.5	19.4	19.2
$42,000-49,999	20.3	20.0	19.9	19.7
$50,000-59,999	20.6	20.3	20.2	20.1
$60,000 and over	20.9	20.7	20.8	20.7
Total	18.8	18.7	18.7	18.6

Source: The American College Testing Program.

Financing Costs

Compared to grants, loans add three financing costs to the set of college attendance costs faced by aid recipients: the loan principal, origination and insurance fees, and interest on the unpaid balance of principal and fees following graduation. The addition of these costs reduces the net benefits of college attendance for those who use loans to help finance their college educations. The more heavily loans are used, the greater is the resulting reduction in net benefits of college attendance to the prospective student.

We have calculated the financing costs of Stafford Student Loans in Table 3 on the following page. For the sake of illustration, let us assume that an individual has taken out a $2,000 loan, corresponding to the top line in the table. Before the borrower receives the loan, first $100 is deducted for the 5 percent origination fee paid to the federal government; then another 2 percent is deducted for the insurance fee paid to the guarantee company authorized by the federal government to act as its agent. (The loan guarantee company may charge up to a 3 percent insurance fee at this time.) The borrower, therefore, receives $1,860 of his or her $2,000 loan.

Following departure from college--graduation or dropping out--the student begins repayment of the loan. If the student chooses to repay the loan in two years, he or she must repay the $1,860 they received, plus the $140 in fees they were charged, plus $171 in interest charges on the unpaid balance of the original $2,000 face amount of the loan. This interest charge represents an effective annual percentage rate of 15.3 percent based on the amount of the loan received by the student to finance college costs. If the student chooses to repay this loan over 10 years, the student repays the $1,860 received, plus $140 in fees, plus $1011 in interest. These interest charges are 8 percent

TABLE 3
Financing Costs of Stafford Student Loans

				2 Years			4 Years			6 Years			10 Years		
Amount Borrowed	Less 5% Origination Fee	Less 2% Insurance Fee(a)	Amount Received	Monthly Payment	Effect. A.P.R.*	Total Repaid	Monthly Payment	Effect. A.P.R.*	Total Repaid	Monthly Payment	Effect. A.P.R.*	Total Repaid	Monthly Payment	Effect. A.P.R.*	Total Repaid
$2000	$100	$40	$1860	$90.45	15.3%	$ 2171	$48.83	11.8%	$ 2344	$35.07/ 35.77	10.9%	$ 2542	$24.27/ 25.63	10.5%	$ 3011
4000	200	80	3720	180.90	15.3	4342	97.66	11.8	4688	70.14/ 71.54	10.9	5084	48.54/ 51.26	10.5	6022
5250(b)	263	105	4882	237.43	15.3	5699	128.18	11.8	6153	92.06/ 93.90	10.9	6673	63.71/ 67.28	10.5	7904
6000	300	120	5580	271.35	15.3	6513	146.49	11.8	7032	105.21/ 107.31	10.9	7626	72.81/ 76.89	10.5	9033
8000	400	160	7440	361.80	15.3	8684	195.32	11.8	9376	140.28/ 143.08	10.9	10,168	97.08/ 102.52	10.5	12,044
10,000	500	200	9300	452.25	15.3	10,855	244.15	11.8	11,720	175.35/ 178.85	10.9	12,710	121.35/ 128.15	10.5	15,055
12,000	600	240	11,160	542.70	15.3	13,026	292.98	11.8	14,064	210.42/ 214.62	10.9	15,252	145.62/ 153.78	10.5	18,066
13,250(c)	663	265	12,322	599.23	15.3	14,383	323.50	11.8	15,529	232.34/ 236.98	10.9	16,841	160.79/ 169.80	10.5	19,948
14,000	700	280	13,020	633.15	15.3	15,197	341.81	11.8	16,408	245.49/ 250.39	10.9	17,794	169.89/ 179.41	10.5	21,077
16,000	800	320	14,880	723.60	15.3	17,368	390.64	11.8	18,752	280.56/ 286.16	10.9	20,336	194.16/ 205.04	10.5	24,088
17,250(d)	863	345	16,042	780.13	15.3	18,725	421.16	11.8	20,217	302.48/ 308.52	10.9	21,925	209.33/ 221.06	10.5	25,970

*Effective Annual Percentage Rate: Calculated on GSL amount received.
(a) May be up to 3 percent.
(b) Sum of $2625 limit for first two years of college.
(c) Sum of $2625 limit for each of first two years and $4000 for each of second two years of college.
(d) Maximum amount for undergraduate study.

for the first four years of repayment, and 10 percent on the remaining six years. The effective annual percentage rate is 10.5 percent calculated on the amount of the loan received by the student. These interest rate calculations do not include the loss of income tax deductibility for interest on student loans as a result of the 1986 tax reforms.

This example illustrates how student loans diminish the net value of higher education to students who use loans to finance collegiate study. Loans diminish value both by introducing considerations of risk and by adding financing costs to college attendance. For students who use loans, net benefits are reduced, and the more loans are used the greater the reduction in net benefits of college attendance.

Can we determine the types of potential college students for which these characteristics of loans are likely to pose problems for participation in higher education? In the following section we explore data from a variety of sources that help identify which subgroups of the population are most likely to have problems with the risk and financing aspects of student loans to finance higher educations.

IV. Attitudes Regarding Educational Finance

In this section we analyze survey data from three sources to determine how different groups of Americans view higher education as an investment, and how loans and specific characteristics of loans--risk, financing costs--influence those perceptions. Among the differing views that Americans have of loans, we are especially interested in this section in how subgroups that have not fared well in higher education during the conversion of federal student aid from grants to loans view higher education as an investment and the use of loans to finance participation in higher education.

This analysis of attitudinal data suggests that attitudes reflect likely behaviors. This linkage has been studied by social psychologists for many decades. The more recent literature in the study of attitude-behavior relationships has focused on the conditions under which the link is strongest. When individuals are confronted with a decision, their attitudes are most closely correlated with the ultimate behavior. The following analyses do not have this condition present and are thus imperfect predictors of human behavior. The particular advantage of the survey data, however, is its noninvasive character. The higher educational enrollment behavior of individuals has not been altered for the purpose of research. Rather, human behavior is estimated by inquiring about attitudes. (For further comment on this limitation of research on human subjects, see the author's End note on Public Policy Analysis at the conclusion of the text.)

Higher Education as an Investment

Recently, the Council for the Advancement and Support of Education (CASE) commissioned the Gallup Organization to ask a representative sample of 1253 American adults a series of questions about higher education. Among the attitudes and perceptions surveyed were assessment of the worth of a college education and of the equality of opportunities for a college education. Results were reported along demographic lines of particular interest here: family income, race, gender, educational attainment.

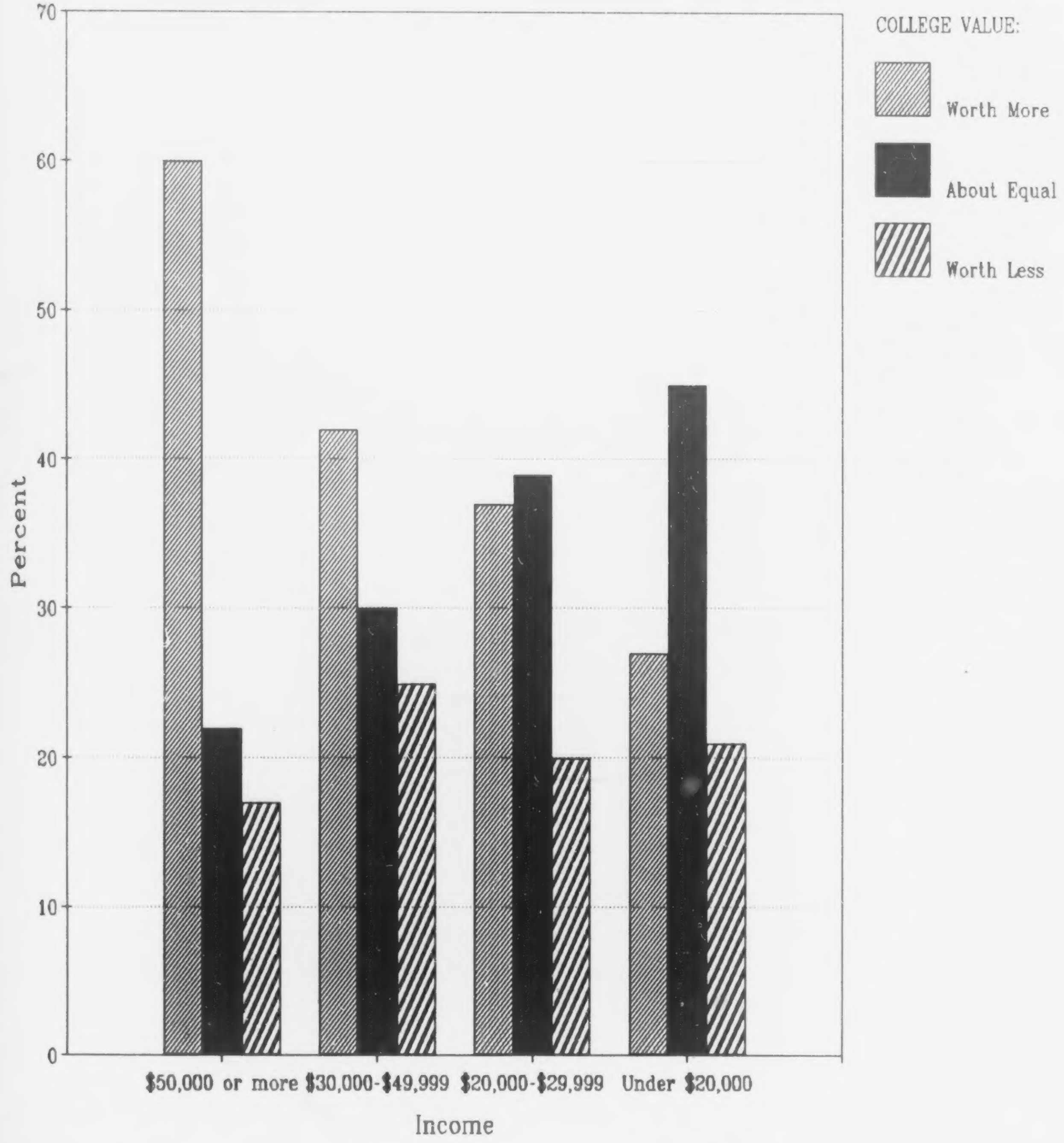
The Gallup survey asked this question:

> **In general, how do you feel about the worth of a college education today? Do you think the overall value most college graduates get back in their lifetime is worth more than they paid for attending college, is worth less than they pay for attending college, or that the value is about equal to what they pay?**

Because this question directly considers benefits and costs of higher education as an investment decision, the results are worth examining in demographic detail.

Adults from higher income families were considerably more likely to report that college was worth more than its cost. Sixty percent of those from family incomes of more than $50,000 per year felt college was worth more than its cost, compared to 27 percent of those from families with incomes below $20,000 per year. These data are shown in Figure 17.

FIGURE 17
VALUE OF A COLLEGE EDUCATION TODAY
BY INCOME
1989



Source: Council for Advancement and Support of Education

Similarly, adults who were college graduates were considerably more likely than people with lesser levels of educational attainment to believe that college was worth more than it cost. Whites were more likely than nonwhites to believe this (Figure 18), as were males compared to females, Republicans compared to Democrats or Independents, those who lived near a college compared to those who did not, and those who rated the performance of colleges highly to those who did not. (Appendix A of this paper contains more detailed information from the CASE survey.)

The Gallup survey for CASE further pursues central concerns of this paper further by probing respondents' perceptions about the accessibility of higher education for racial minorities. The question was asked of survey participants:

> **Do you think that all high school graduates--regardless of race--have equal access to a college education, or do you think a person's race makes it harder to gain access to a college education?**

The results of this survey question are presented in Appendix B. Figure 19, in particular, shows the difference between responses of whites and blacks to the above question. All groups show roughly similar response patterns except by race: 42 percent of all whites said that race made college access harder, compared to 59 percent for nonwhites. Clearly, minorities do not share the perception held by many whites that race is not a relevant factor in college access.

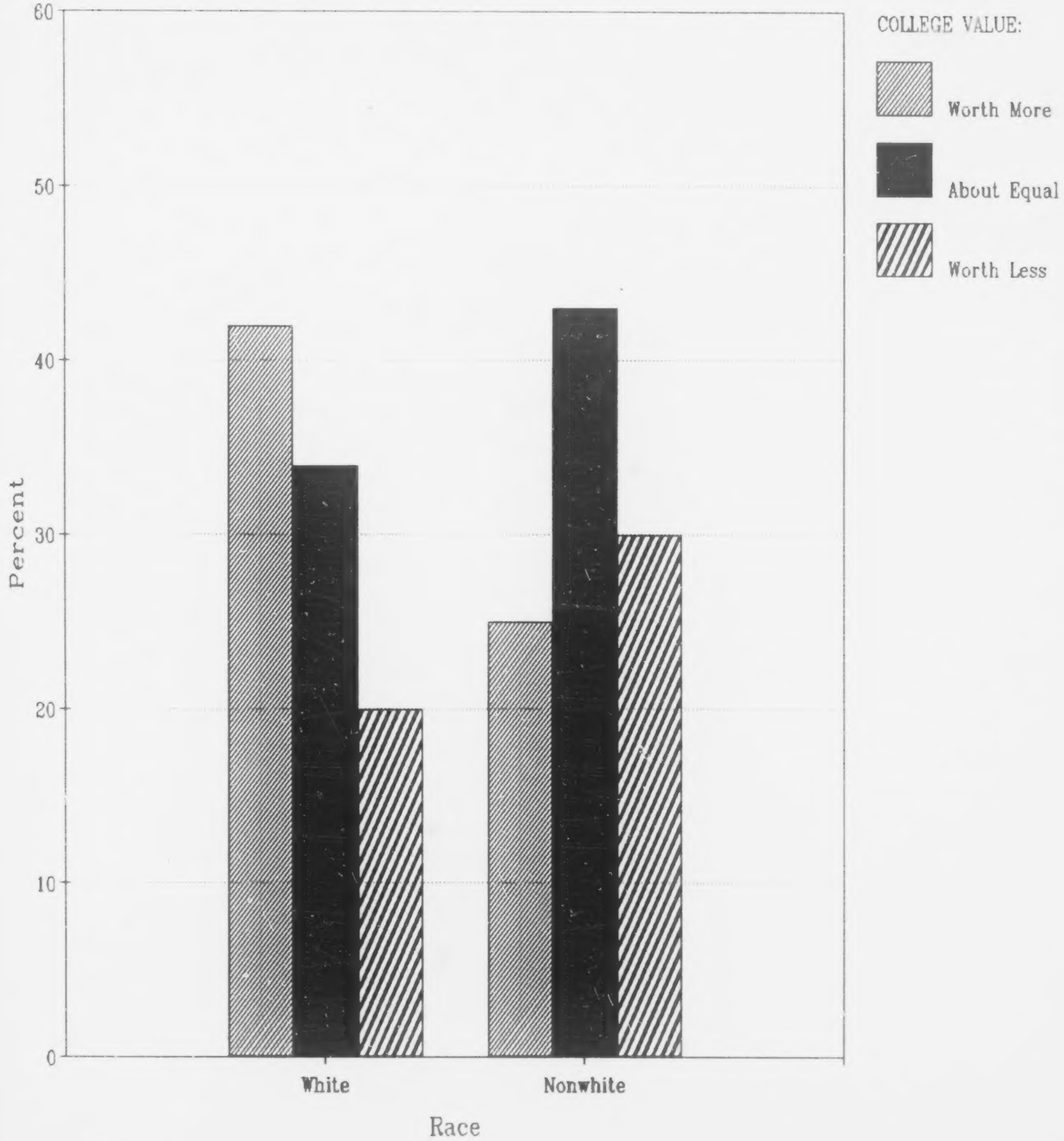
Concerns About Financing College

Money magazine also surveyed a nationwide sample of 2370 adult Americans in 1988 to determine, among other things, their areas of greatest financial concerns. The list of possible responses included food, housing, clothing, education/college, child care, medical costs, job loss, retirement savings, and care for aged parents. Responses were tabulated by a variety of demographic characteristics of the respondents important to our study here.

Among all respondents, 28 percent reported that they worried about paying for education/college. This percentage was higher for men (30%), for people 35 to 49 years old (46%), and for people with household incomes of more than $50,000 per year (45%).

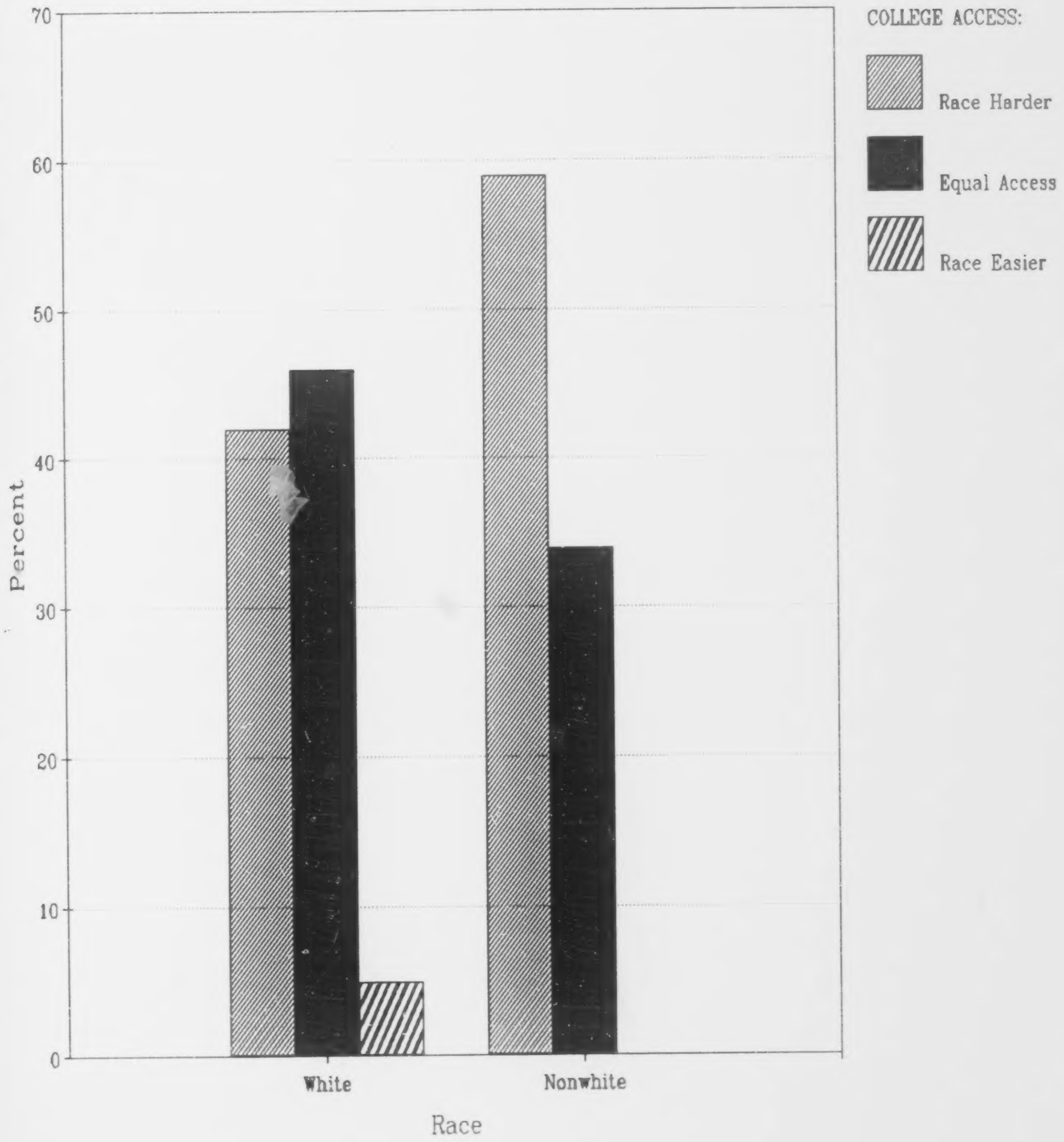
The concern for paying for education/college, unlike most financial areas, *increases* with income. Financial worries tend to decrease with income for medical costs, housing, food, clothing, and child care. But they increase as household income increases for retirement, education/college, and concern for care of aged parents. Among survey participants with incomes below $15,000 per year, college education ranked sixth among the nine financial areas listed. However, where incomes were over $50,000, education/college ranked second. These data are shown in Figure 20.

FIGURE 18
VALUE OF A COLLEGE EDUCATION TODAY BY RACE
1989



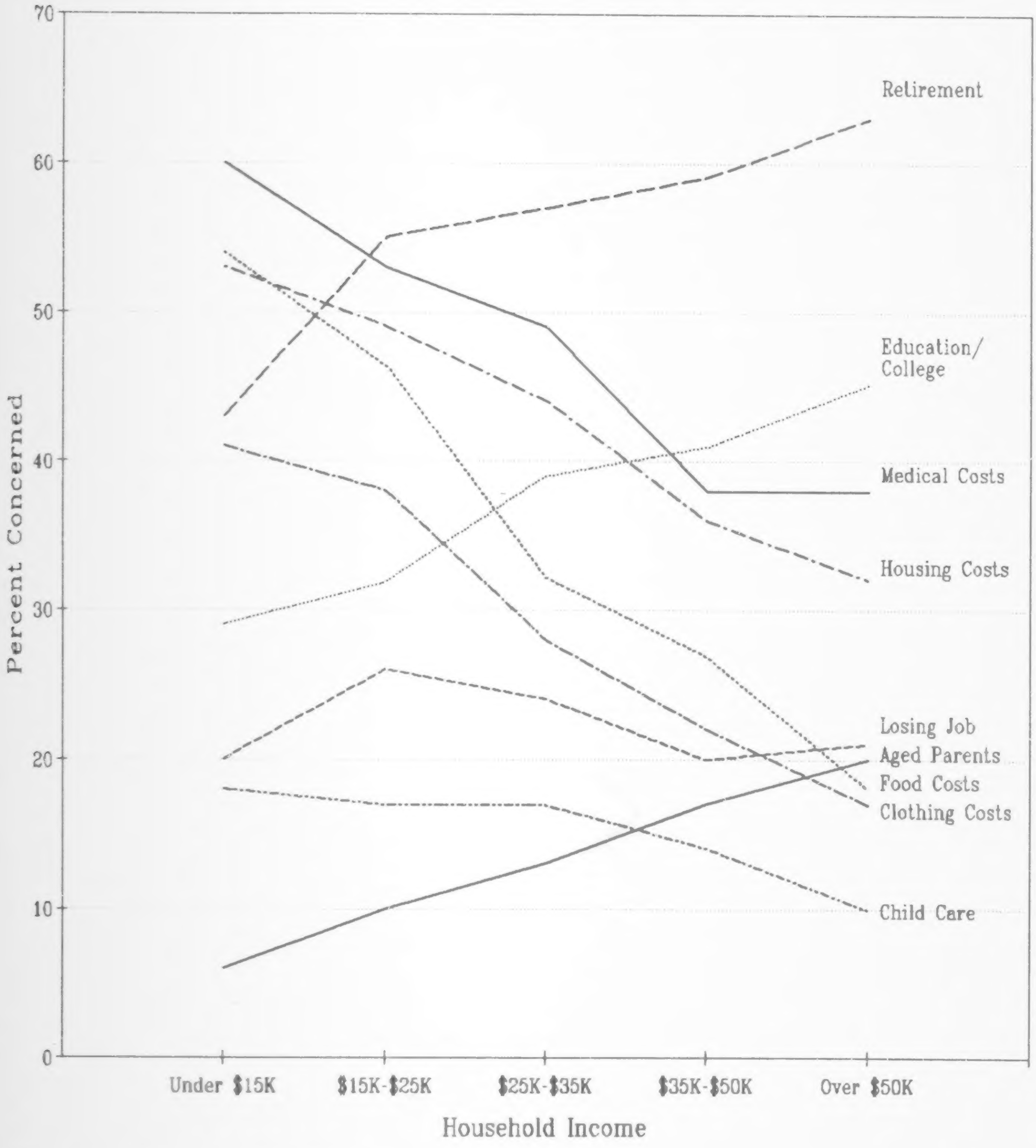
Source: Council for Advancement and Support of Education

FIGURE 19
ACCESS TO A COLLEGE EDUCATION TODAY BY RACE
1989



Source: Council for Advancement and Support of Education

FIGURE 20
FINANCIAL AREA WORRIES
BY HOUSEHOLD INCOME
1988



Source: Americans and Their Money, Money Magazine.

Attitudes Toward Educational Loans

Several studies of consumer finances that address willingness to borrow for educational purposes were conducted by the Federal Reserve System between 1959 and 1983. These surveys, like the two preceding surveys, employed national samples of the adult population and compiled results in demographic dimensions of the population of interest in this study.

One question we have focused on is willingness to borrow for various purposes, among them education. The related question this survey asked participants:

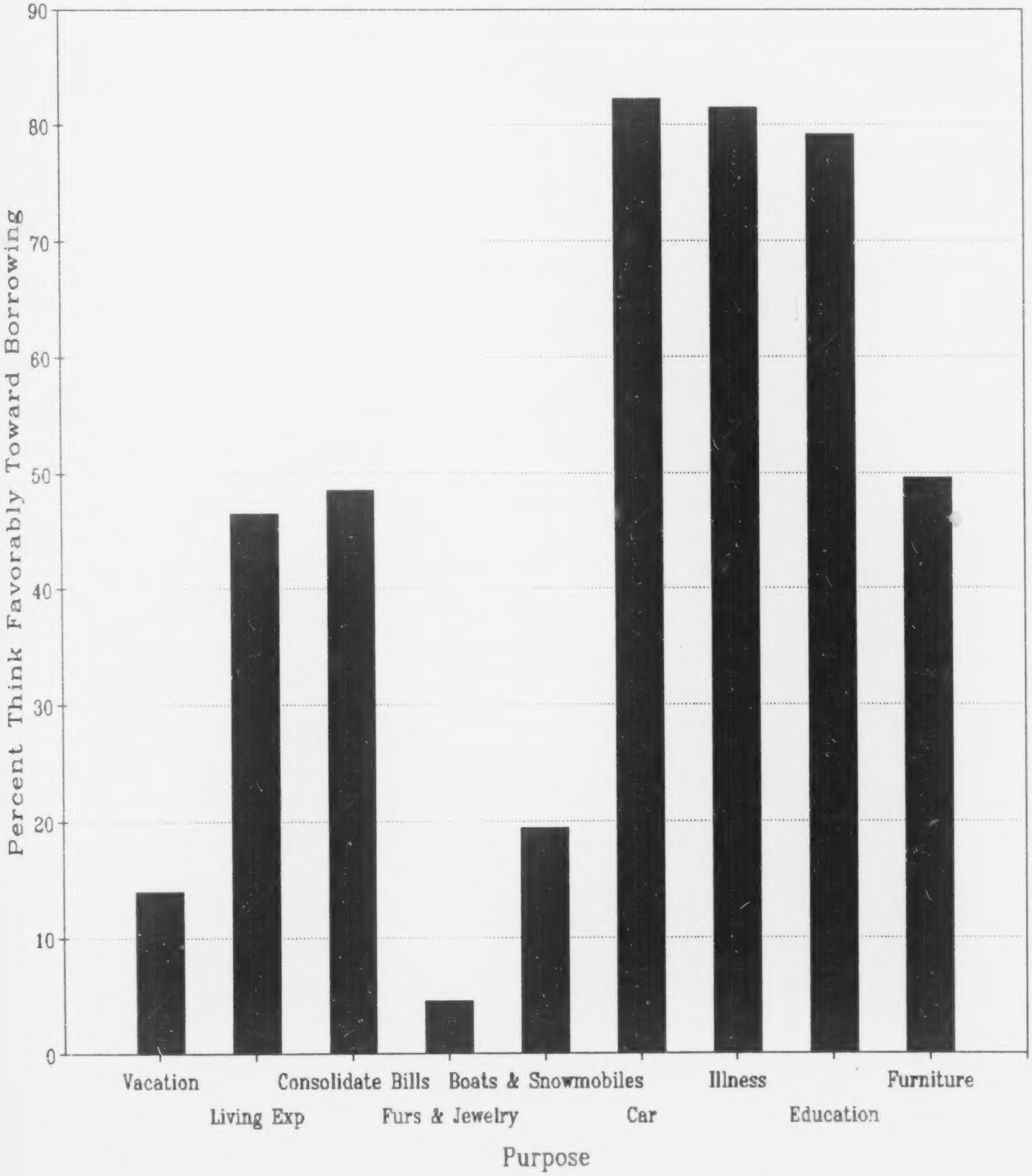
> **People have many different reasons for borrowing money which they pay back over a period of time. Would you say that it is all right for someone like yourself to borrow money:**
> **for expenses of a vacation trip?**
> **for living expenses when income is cut?**
> **to consolidate bills which have piled up?**
> **to finance the purchase of a fur coat or jewelry?**
> **to finance boats, snowmobiles and other hobby equipment?**
> **to finance the purchase of a car?**
> **for expenses due to an illness?**
> **to finance educational expenses?**
> **to finance the purchase of furniture?**

In 1983, the most recent survey year, nearly 80 percent of the American adults surveyed looked favorably on borrowing to finance educational expenses. Education, along with buying a car and to finance expenses of an illness, were the most worthy reasons for borrowing money. (See Figure 21.) This finding is fairly consistent over the years of the Federal Reserve System surveys, from 1959 through 1983, except for a slight decline in willingness to borrow for education since 1970.

For the purposes in this paper, we are especially interested in willingness to borrow to finance educational expenses by income. Figure 22 illustrates the proportion of adult Americans willing to borrow for education by income in 1983. The pattern is striking. Below about $20,000 of income, willingness to borrow for education drops off sharply. In the $4,000 to $6,000 income range, for example, 62 percent think favorably, compared to 85 to 90 percent for people with incomes of more than $20,000 per year. This pattern is similar to results from the 1977 survey.

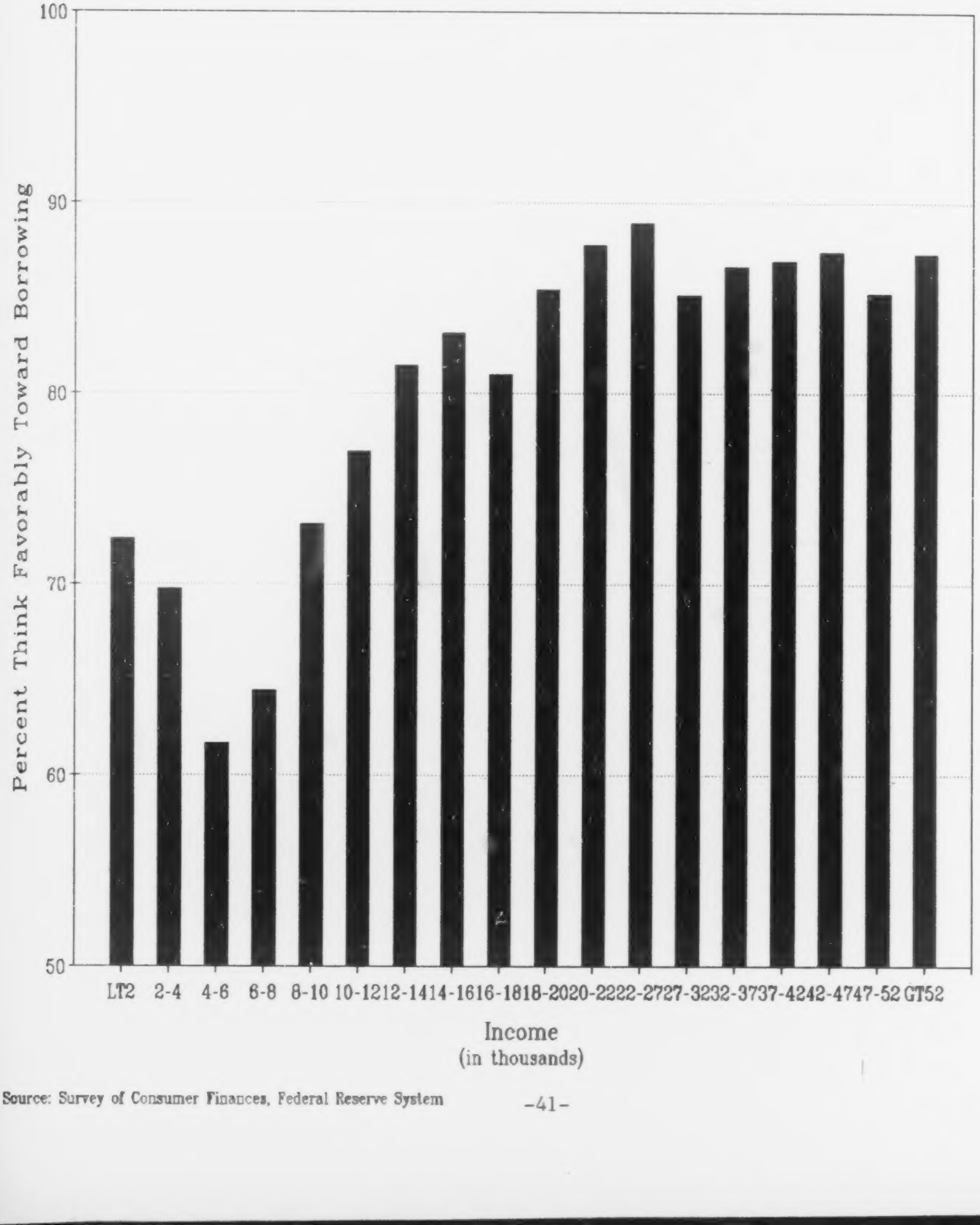
When adjustments to income are made for inflation, we can examine trends in favorable attitudes toward borrowing to finance education for the years 1959, 1967, 1977, and 1983. Figure 23 plots these data in constant 1983 dollars. Between the end points, the proportion of the population that indicated incomes below about $25,500 per year and a favorable attitude toward educational borrowing increased by 8 percent. This compares to an increase of 5 percent among those with incomes of $25,500 to $34,000, and an increase of 4 percent for those with incomes of more than $34,000 per year.

FIGURE 21
WILLINGNESS TO BORROW FOR VARIOUS PURPOSES
1983



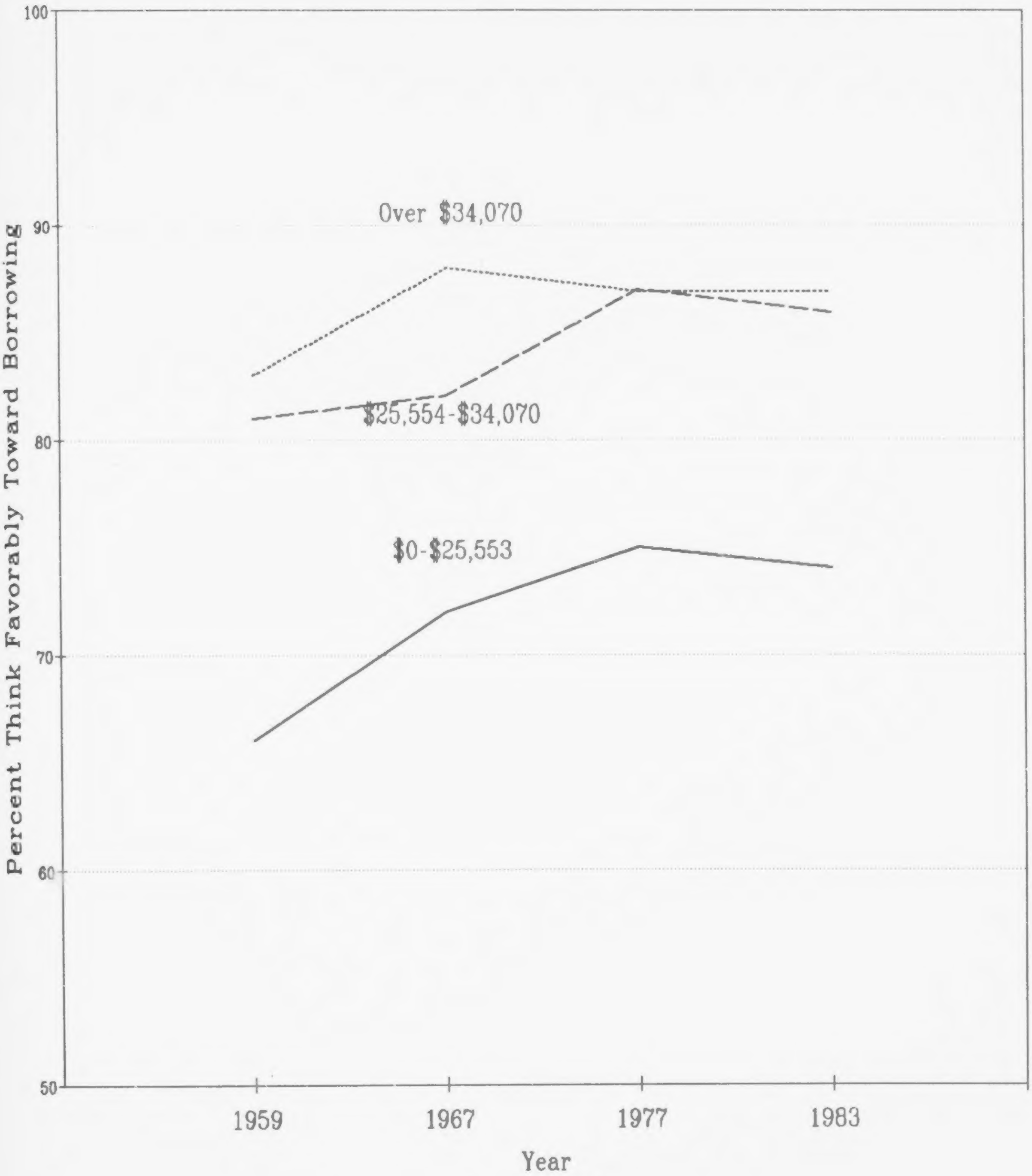
Source: 1983 Survey of Consumer Finances, Federal Reserve System

FIGURE 22
WILLINGNESS TO BORROW FOR EDUCATIONAL EXPENSES BY INCOME
1983



Source: Survey of Consumer Finances, Federal Reserve System

FIGURE 23
WILLINGNESS TO BORROW FOR EDUCATIONAL EXPENSES BY HOUSEHOLD INCOME INTERVALS
1959, 1967, 1977 AND 1983



The Federal Reserve System data also identify other populations less likely to view borrowing to finance educational expenses favorably. Generally, young people feel better about borrowing for education than older people, greater educational attainment leads to more favorable attitudes toward borrowing, Asians are more likely and Hispanics are less likely than whites to have favorable attitudes, professionals are more likely than laborers, and men more likely than women to view educational loans favorably.

Clearly, Americans characterized in different ways hold differing views toward loans to finance educational expenses. Not all Americans share the dominant view that loans would be a good idea for someone like themselves. Many of the characteristics of those who do not view educational loans favorably are similar to the characteristics of the population that financial aid programs were designed to serve.

Attitudes Toward Risk

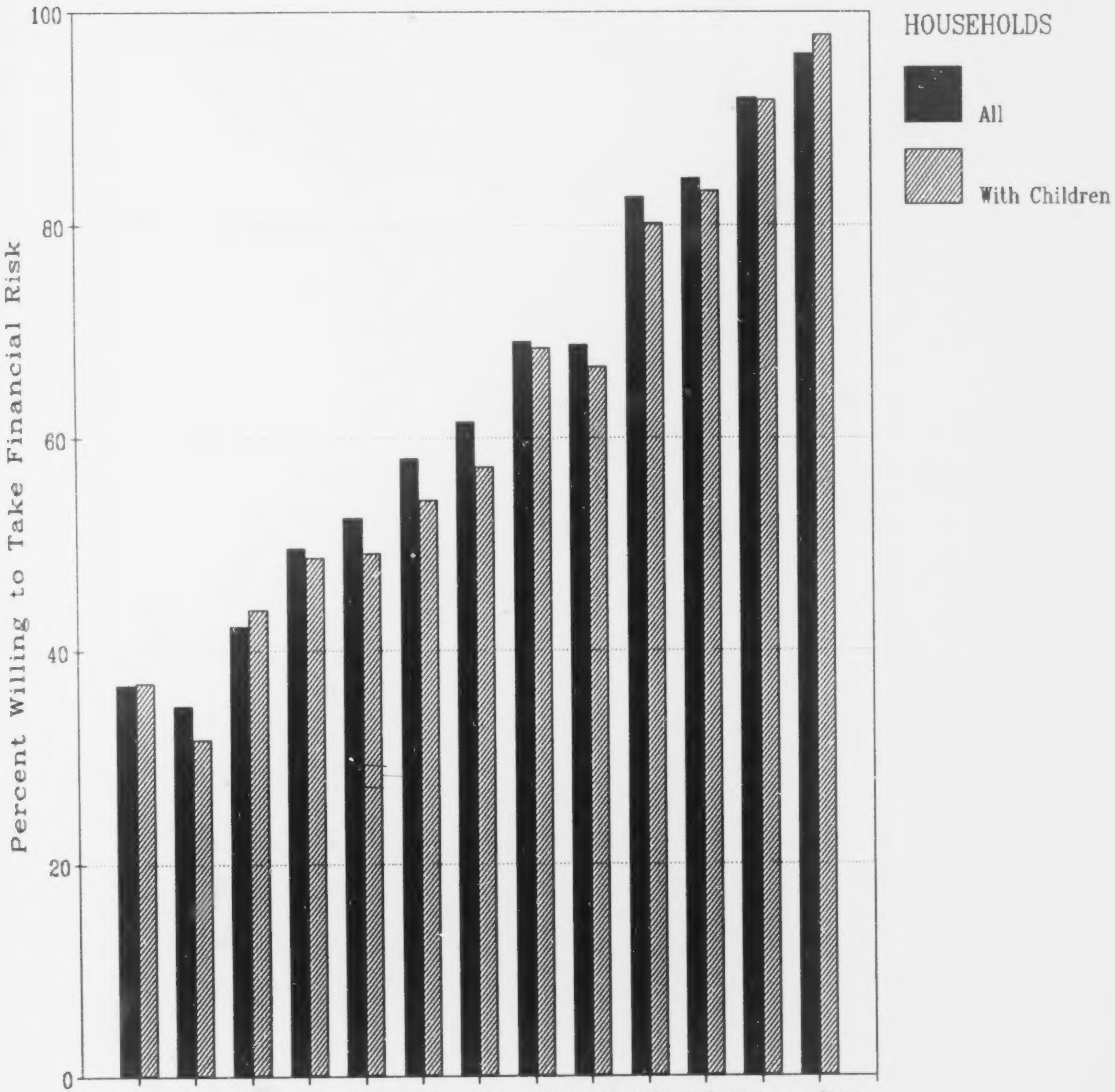
Because a fundamental characteristic of borrowing is the borrower's risk that he or she may not be able to repay the debt, we have examined attitudes toward risk through the Federal Reserve System surveys of consumer finances. Our analysis of these data parallels the previous examination of attitudes toward borrowing to finance educational expenses, with two exceptions. First, we have extended our analysis in this case to examine the risk-taking attitudes of households with children and all households. Second, the available data do not permit an examination of the question of risk taking with respect to educational investments. A summary of our findings follows.

Income. The proportion of heads of households willing to take financial risk for savings and investments is shown in Figure 24 for 1983. For families with children and all families, willingness to take financial risks is clearly and strongly related to income. Where the income of the head of the household is less than $7,500 per year (in 1983), about 30 to 35 percent of survey participants reported a willingness to take at least some financial risk with their savings and investments. This proportion increased with income to about 95 percent of those with incomes of more than $200,000 per year. The pattern for families with children is very similar to the pattern for all families except that families with children were slightly more averse to risk.

Net worth. A somewhat similar pattern emerges from data describing willingness to take risk by the net worth of the head of the family. Figure 25 shows this data for 1983. The proportion of household heads willing to take financial risks with savings and investments increases from about 40 percent for those with zero to $5,000 of net worth, to more than 80 percent where net worth exceeds a quarter of a million dollars.

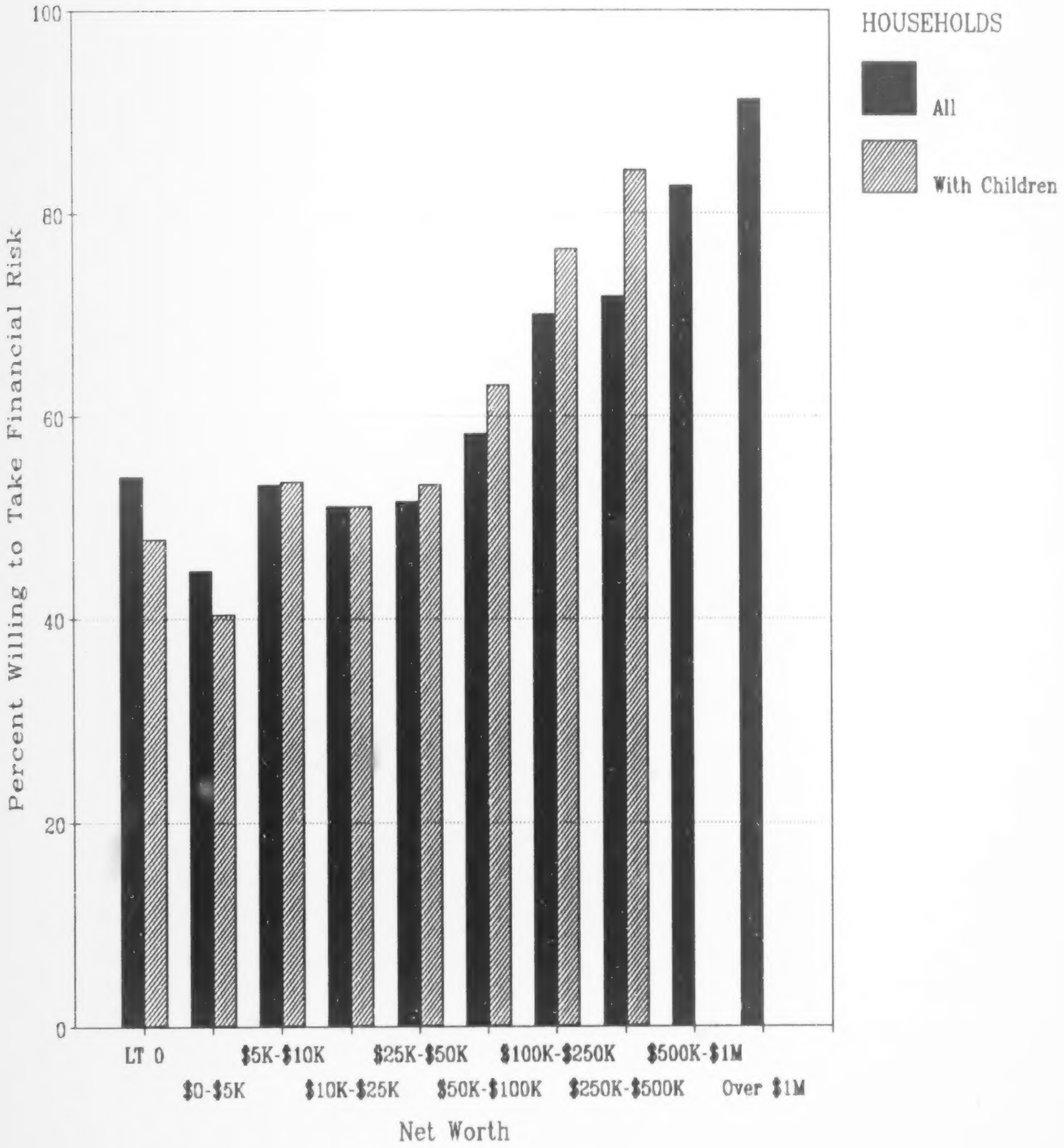
Educational attainment. Willingness to take financial risk is also strongly related to educational attainment of the household head, as shown in Figure 26. Where the head has 0 to 8 years of education and there are children present, less than 40 percent would take on risk. However, where the head is a college graduate, more than 70 percent would be willing to take financial risk.

FIGURE 24
ATTITUDE TOWARDS RISK FOR SAVINGS AND INVESTMENTS BY INCOME OF HEAD OF HOUSEHOLD
1983



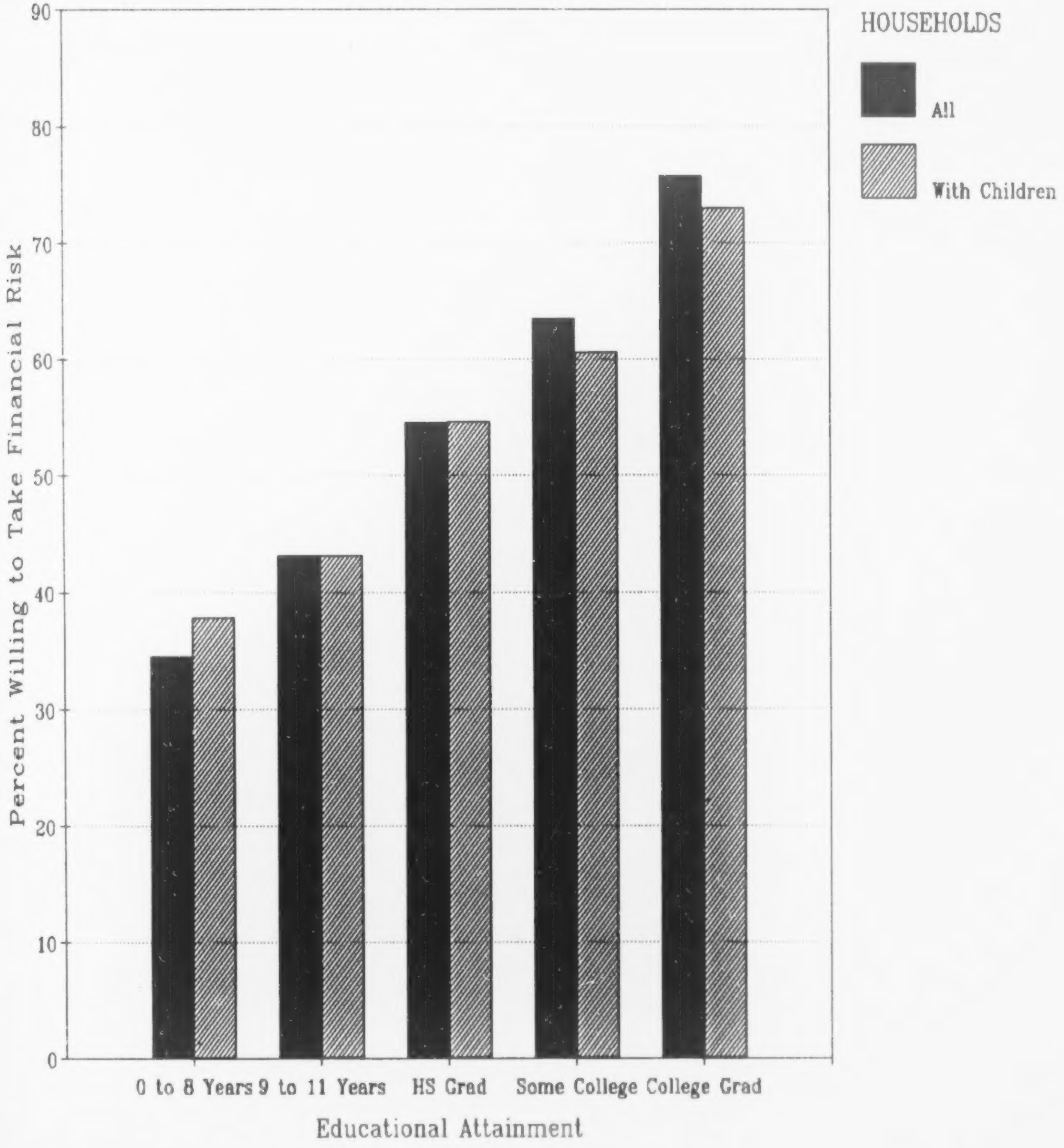
Survey of Consumer Finances, Federal Reserve System.

FIGURE 25
ATTITUDE TOWARDS RISK FOR SAVINGS AND INVESTMENTS BY NET WORTH OF HEAD OF HOUSEHOLD
1983



Survey of Consumer Finances, Federal Reserve System.

FIGURE 26
ATTITUDE TOWARDS RISK FOR SAVINGS AND INVESTMENTS BY EDUCATIONAL ATTAINMENT OF HEAD OF HOUSEHOLD
1983



Survey of Consumer Finances, Federal Reserve System.

Age. Within families with children, willingness to take financial risk is related to age of head in a nonlinear fashion. Young heads--presumably with young children--are considerably less willing to take risk than are heads most likely to have college age children. Also, young household heads with children are considerably less willing to take on risk than are all families with similar aged heads. These data are shown in Figure 27.

These data suggest a somewhat greater reluctance to assume risk among families with children than among all families. The presence of children appears to be related to risk taking attitudes. But more importantly, the children targeted for need-tested financial aid appear to be concentrated in families least likely to be willing to assume financial risk. These households are characterized by low income, low net worth, and lack of educational attainment among the parents. Some of these characteristics--such as income and net worth--may be partially offset in a maturing family where income and assets are likely to be at a peak about the time the children have reached college age.

Willingness to Save for Children's Education

Presumably, financially comfortable families are better able to save for the college educations of their children than are poor families. Moreover, as was shown in Figure 20, worries about the cost of education/college increase with income. But the question remains: Where in the financial scheme of the family does the importance of saving for college rank? We have examined this question with the Federal Reserve System data.

In Figure 28 we show the proportions of families with children at different family income levels that identify their children's educations as their first or second most important reason for saving. The patterns in the data are somewhat erratic, and in important respects not particularly satisfying. However, the following findings are warranted by the data.

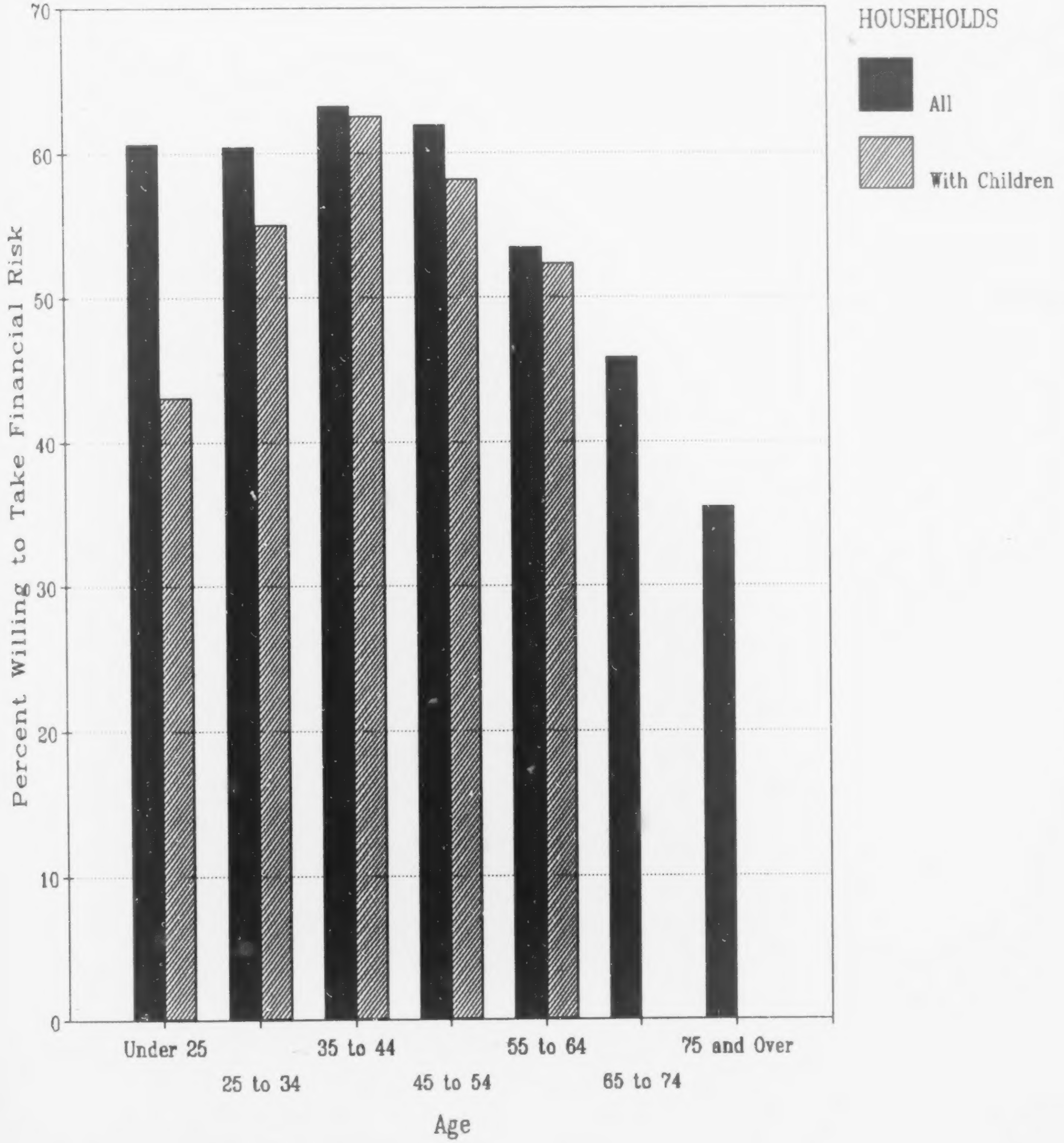
First, at no income level does savings for children's education rank as the first or second most important savings priority for more than 30 percent of the survey respondents. That is to say, for three quarters of all families with children, college savings is not among the top two savings priorities. Apparently, even among comfortable families with children, preparing for college attendance costs is not a high priority.

Second, up to $100,000 of family income, savings for children's educations actually declines as income increases. Among families with incomes of less than $7,500 per year (1983), about 15 percent cite children's education as their most important reason for saving. The figure drops to about 5 percent for families with incomes of $75,000 to $100,000.

Third, especially in families with above $30,000 in income (1983), college savings appears to grow as families' second most important reason for saving.

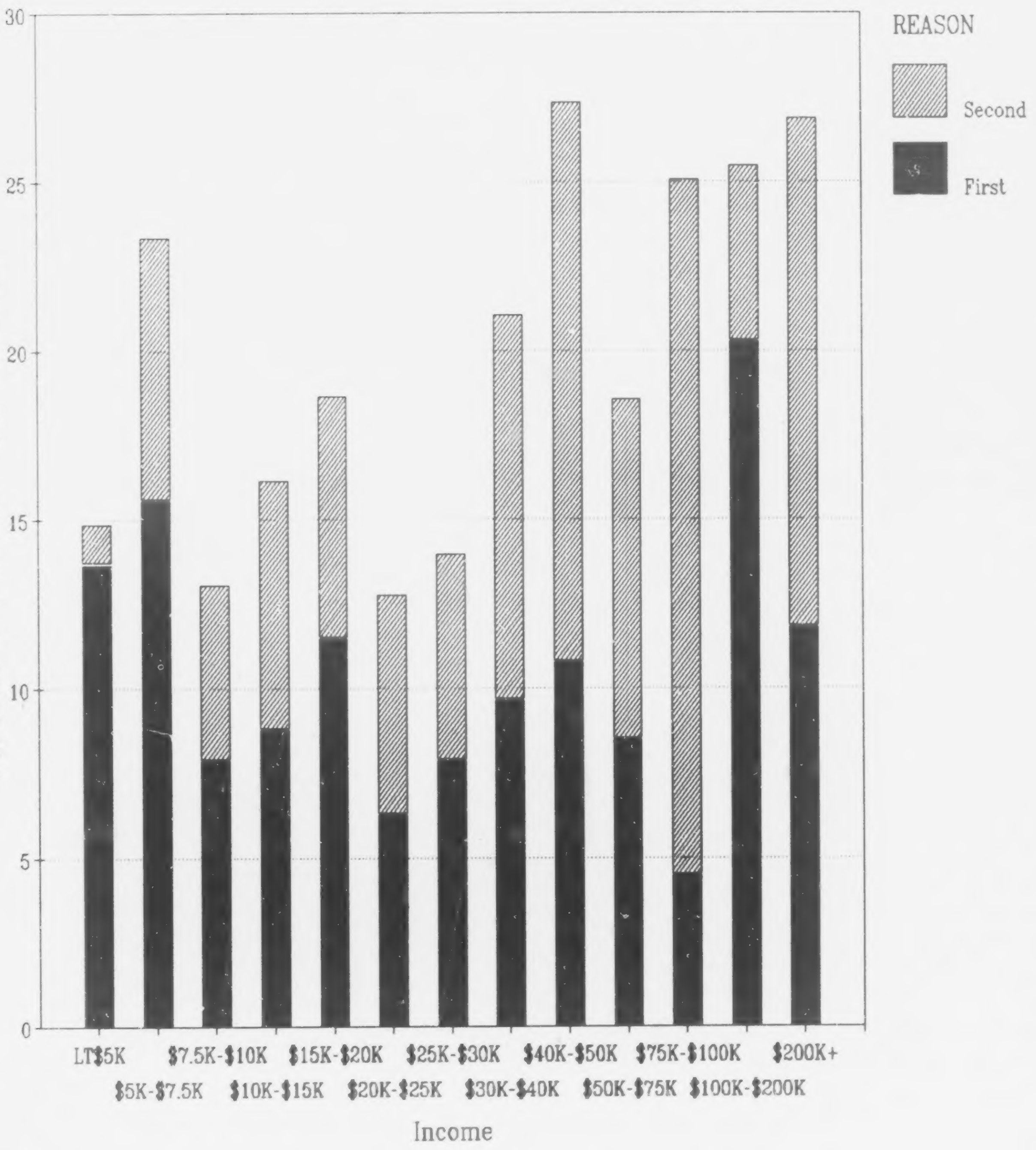
Despite the apparently recognized need for saving for college, the evidence from the Federal Reserve System survey suggests the large majority of families with children and sufficient income to be able to save do not rank college savings very highly, if at all, among family priorities.

FIGURE 27
ATTITUDE TOWARDS RISK FOR SAVINGS AND INVESTMENTS BY AGE OF HEAD OF HOUSEHOLD
1983



Survey of Consumer Finances, Federal Reserve System.

FIGURE 28
MOST IMPORTANT REASONS FOR SAVING ARE CHILDRENS' EDUCATION BY FAMILY INCOME
1983



Source: 1983 Survey of Consumer Finances, Federal Reserve System.

V. Remaining Questions

This study does not address other public policy problems associated with the misuse of loans in student financial aid. Janet Hansen, Frank Newman, and others have voiced serious concerns about the proper role of loans in higher education. I would add a few concerns to the list.

First, I think it possible that student loans for poor people fail the benefit-cost test to which any public expenditure must be subject. If loan costs to the federal treasury are only half of the loan amounts received by students, and the default rate is nearly 50 percent for very low income borrowers, then the cost to the federal government of a dollar loaned is nearly a dollar--not the 50 percent claimed. Add to this often futile collection costs--and the huge loss of low income enrollments that results when loans are substituted for grants--and the result must be a near certain failure of the benefit-cost test applied to loans to students from low income backgrounds.

Second, while the greatest gain in cumulative loan indebtedness has been among the very lowest income students enrolled in higher education, and loans remain profitable to lenders, then clearly the source of Stafford Student Loan program profitability to lenders must be shifting from middle income borrowers to poor borrowers. Are we comfortable with this as a socially endorsed outcome of federally guaranteed aid programs?

Finally, as a part of a far broader moral question of public finance, by what right does a generation of adults educated without loans obligate their children to pay for their own education? The 1980s have created a legacy of consumption far beyond our production that was and continues to be financed by borrowing from the welfare of our children. The American tradition of investing in our children so that their lives might be better than ours may have been undermined to some extent during the 1980s. The shift in student aid from grants to loans can be interpreted as a reflection of this fundamental change in personal and public values.

End note on Public Policy Analysis

An experimental design to test the effectiveness of student loans regarding higher educational participation goals of student aid was not possible in this study. Such an approach would involve the use of human subjects in a research design involving a test of different forms of financial aid on their collegiate enrollment behavior. Because this is neither possible nor desirable, we are left to interpret the effects of human behavior by indirect means. This end note alerts the reader to the limits of public policy analysis and the special problems of invasive behavioral research in student financial aid.

Let us suppose we are interested in the effects of loans compared to grants on the collegiate enrollment behavior of otherwise eligible high school graduates. The experimental research design would involve the random selection of several samples from the population. These samples would be large enough to be able to analyze different subgroups within them: e.g. men and women, poor, middle income, and rich, whites, blacks, Hispanics, and Asians, etc. To one such sample we would give only student loans. To another we would allocate only grants. To a third we might offer no financial aid at all. To a fourth we might offer a mix of grants and loans.

After a year or two, we would return to these samples to determine for each student their collegiate enrollment behavior following receipt of the financial aid awarded. By comparing their access, choice, and persistence enrollment behavior at the end of study period, we could infer the effects each financial aid award type had on their enrollment behavior.

A research design such as that outlined above is unethical. Given the esteem we hold for human welfare, social science research is prevented from intervening in people's lives in ways that could adversely impact their well being. Because we believe in the importance of higher education to individual well being, manipulating the environments that enable or impede an individual to achieve the conditions that result from higher education for purely scientific study would be unacceptable.

Because the option of an experimental design is not available, the financial aid researcher is left to seek answers to questions regarding the effectiveness of different forms of financial aid by other means. The alternative means employed in this study avoids the intervention problem by attempting to interpret human behavior after it has occurred, and without the use of control groups. That is, at the margin of group behavior, we observe over time changes in behavior. Also, we observe differences between groups in their behaviors. Social science theory guides us in the interpretation of that behavior. Economic theory, for example, is based on the assumption that people are motivated to maximize their own welfare. They are constrained from doing so by the limited availability of resources. As a result, they are forced to make choices that will maximize their welfare within the limits imposed by available resources such as time, money, etc.

In this study, we have used the economic theory of investment to examine problems in the use of loans by students to finance their higher educations. Loans impose special costs on college attendance in ways that diminish net benefits of college, and make alternatives to collegiate enrollment relatively more attractive to economically marginal individuals. This interpretation of marginal enrollment behavior is plausible and appropriate from the perspective of economic theory: as the net benefit of college attendance has been decreased by the substitution of loans for grants to low income students, economically marginal individuals have chosen alternatives to collegiate study.

There is both power and frailty in this analysis. The power comes from the thoroughly tested validity of microeconomic theory in seeking to explain the welfare maximizing behavior of individuals. Time and again, under the widest of circumstances, individuals have been shown to make decisions in such a way that they will enhance their private welfare. Often the information they have available to evaluate their options is imperfect. Sometimes individuals make decisions that are altruistic. Once in a while a person makes an apparently irrational decision. But by and large, human beings can be counted on to make decisions that will maximize their own private welfare. Attending college is one of these decisions, and careful analysis of the true, full costs of attending college provides a tested, valid means of interpreting changes in college enrollment behavior of individuals over time.

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APPENDIX A
Value of a College Education Today
1989

	Number	Worth More	About Equal	Worth Less	Don't Know
Total	1253	39%	35%	22%	4%
Sex					
Male	632	49	29	19	3
Female	621	31	41	24	4
Age					
18-29	298	37	40	21	2
30-49	534	43	30	25	2
50 and over	402	37	37	19	7
Education					
College graduate	393	56	23	18	3
Some college	251	38	34	26	2
HS graduate	458	34	38	25	3
Less than HS grad	141	31	45	17	7
Race					
White	1075	42	34	20	4
Nonwhite	166	25	43	30	2
Region					
East	305	34	40	22	4
Midwest	322	40	39	19	2
South	372	42	32	23	4
West	253	39	31	23	6
Political Ideology					
Republican	421	46	33	19	2
Democrat	383	36	38	22	4
Independent	449	36	35	24	5
Income					
$50,000 or more	275	60	22	17	1
$30,000-$49,999	320	42	30	25	3
$20,000-$29,999	253	37	39	20	4
Less than $20,000	321	27	45	21	7
Religion					
Born Again Prot.	308	38	39	19	4
Other Protestant	395	40	38	17	5
Catholic	321	44	28	26	3
Jewish	33	35	29	28	9
None	54	33	33	32	1

	Number	Worth More	About Equal	Worth Less	Don't Know
Proximity to Higher Education					
Close to college	690	45	31	21	3
Not close	563	33	40	22	5
College Grade					
A/B	578	46	37	14	3
C or below	558	33	34	30	3
Children					
Under 18	510	40	33	25	3
13-17	192	41	36	22	1
None under 18	740	39	37	20	5

Source: Gallup Organization. 1989. Attitudes about American colleges. Council for Advancement and Support of Education: Washington, D. C.

Note: This table includes both published and unpublished data. CASE was kind enough to share print outs of the tabulated survey responses with the author.

APPENDIX B
Access to a College Education
1989

	Number	Everyone Has Equal Access	Race Makes It Harder	Race Makes It Easier	Don't Know
Total	1253	45%	44%	4%	7%
Sex					
Male	632	48	43	4	6
Female	621	42	46	4	8
Age					
18-29	298	45	49	2	4
30-49	534	45	46	5	4
50 and over	402	45	40	4	11
Education					
College graduate	393	48	44	6	3
Some college	251	41	50	4	5
HS graduate	458	44	46	4	7
Less than HS grad	141	47	39	1	13
Race					
White	1075	46	42	5	7
Nonwhite	166	34	59	0	7
Region					
East	305	44	46	4	6
Midwest	322	44	46	4	6
South	372	50	41	2	7
West	253	38	48	6	8
Political Ideology					
Republican	421	52	39	3	6
Democrat	383	41	48	1	10
Independent	449	42	46	7	5
Income					
$50,000 or more	275	50	41	5	4
$30,000-$49,999	320	44	45	6	5
$20,000-$29,999	253	45	45	3	7
Less than $20,000	321	44	45	2	9
Religion					
Born Again Protestant	308	46	45	3	7
Other Protestant	395	42	45	5	9
Catholic	321	49	42	4	5
Jewish	33	41	56	0	4
None	54	32	59	4	5

	Number	Everyone Has Equal Access	Race Makes It Harder	Race Makes It Easier	Don't Know
Proximity to Higher Education					
College close	690	49	42	4	5
College not close	563	41	47	3	9
Children					
Under 18	510	43	48	4	4
13-17	192	43	48	6	3
None under 18	740	46	43	3	8
Value of Education					
More than cost	530	51	42	4	4
Less than cost	262	42	49	3	6
Equal to cost	412	41	46	4	9

Source: Gallup Organization. 1989. Attitudes about American colleges. Council for Advancement and Support of Education: Washington, D. C.

Note: This table includes both published and unpublished data. CASE was kind enough to share print outs of the tabulated survey responses with the author.

APPENDIX C

Mean Total GSL Loan Debt for 1983-84 Pennsylvania Undergraduates, By Family Incomes and Types of Institutions Last Attended

Income	4-Year Private	State Universities	State Related	Junior Colleges	Community Colleges	Nursing Schools	Proprietary Schools	Out-of-State	All Schools
None	$5,232	$4,302	$4,650	$3,080	$2,508	$4,915	$2,723	$4,433	$3,214
$1 to $5,000	5,585	5,040	5,404	3,402	2,833	4,867	2,735	4,488	3,793
$5,001 to $10,000	5,147	4,269	4,652	3,104	2,703	4,652	2,795	3,654	3,570
$10,001 to $15,000	5,232	4,363	4,552	3,306	2,703	4,372	2,902	3,918	3,787
$15,001 to $20,000	5,340	4,836	4,766	3,810	2,866	4,414	3,004	4,264	4,063
$20,001 to $25,000	5,764	5,044	5,061	3,408	2,751	4,614	3,122	4,696	4,350
$25,001 to $30,000	5,735	5,359	5,254	3,520	2,907	4,763	3,250	5,100	4,613
$30,001 to $40,000	6,142	4,873	5,281	3,715	2,629	4,493	3,281	5,627	4,867
$40,001 to $50,000	6,457	5,202	5,463	3,428	2,506	4,270	3,235	6,000	5,383
Above $50,000	6,723	4,724	5,587	3,309	2,871	4,170	3,610	6,304	5,895
Total	$5,800	$4,878	$5,102	$3,427	$2,735	$4,574	$2,424	$4,885	$4,238
Number	16,717	11,426	13,795	1,373	6,975	1,665	30,828	12,445	95,224

Source: Pennsylvania Higher Education Assistance Agency.

APPENDIX D

Mean Total GSL Loan Debt for 1988-89 Pennsylvania Undergraduates, By Family Incomes and Types of Institutions Last Attended

Income	4-Year Private	State Universities	State Related	Junior Colleges	Community Colleges	Nursing Schools	Proprietary Schools	Out-of-State	All Schools
None	$6,399	$5,060	$4,891	$3,606	$3,270	$5,555	$2,993	$3,084	$3,950
$1 to $5,000	6,858	6,195	6,497	3,659	3,342	6,250	3,387	3,655	4,952
$5,001 to $10,000	6,615	5,456	5,843	3,804	3,250	5,144	3,797	3,900	5,057
$10,001 to $15,000	6,182	5,299	5,547	3,509	3,046	5,309	3,717	4,390	5,039
$15,001 to $20,000	6,161	5,161	5,508	3,567	3,065	5,337	3,851	4,848	5,197
$20,001 to $25,000	6,222	5,542	5,623	3,542	3,027	5,655	3,999	5,186	5,411
$25,001 to $30,000	6,330	5,748	5,507	3,585	2,977	5,520	4,124	5,416	5,493
$30,001 to $40,000	6,216	5,645	5,725	3,764	3,028	4,835	4,142	5,441	5,526
$40,001 to $50,000	6,002	5,431	5,736	3,619	3,034	5,295	4,043	5,545	5,509
Above $50,000	5,838	5,270	5,808	3,617	2,960	6,611	4,077	5,871	5,612
Total	$6,173	$5,500	$5,699	$3,636	$3,087	$5,436	$3,747	$4,644	$5,288
Number	28,633	20,247	28,230	1,577	5,791	527	8,514	20,070	113,589

Source: Pennsylvania Higher Education Assistance Agency.

APPENDIX E

November, 1985 Default Rates for Pennsylvania Undergraduate Borrowers
Whole Loans Reached Maturity in FY 1984,
By Adjusted Gross Incomes and Type of School Last Attended

Income	4-Year Private	State Universities	State Related	Junior Colleges	Community Colleges	Nursing Schools	Vo-Tech Schools	Prop. School	Out-of-State	All Schools
Unknown	4.3%	8.5%	6.1%	10.7%	13.0%	3.3%	6.3%	20.3%	6.9%	7.5%
Under $6,000	21.2%	20.4%	22.2%	41.9%	38.3%	11.1%	20.2%	54.1%	33.8%	41.5%
$6,000 to $11,999	13.1%	13.3%	14.1%	24.7%	23.7%	7.7%	13.6%	37.5%	27.7%	26.5%
$12,000 to $17,999	10.9%	7.6%	12.2%	14.8%	15.9%	3.0%	13.6%	26.7%	20.7%	18.1%
$18,000 to $23,999	6.5%	7.2%	7.4%	13.1%	11.5%	4.1%	9.5%	17.7%	16.0%	11.8%
$24,000 to $29,999	6.1%	5.0%	4.6%	4.7%	9.1%	3.3%	2.2%	11.6%	10.5%	7.9%
$30,000 to $35,999	4.7%	3.7%	3.8%	5.7%	8.3%	0.7%	4.8%	9.6%	5.4%	5.8%
$36,000 to $41,999	3.2%	4.1%	2.6%	1.6%	6.4%	4.1%	5.9%	8.3%	4.4%	4.5%
Over $42,000	1.8%	1.9%	2.9%	8.1%	9.9%	1.9%	12.5%	8.4%	3.3%	3.4%
Total	7.9%	8.6%	9.1%	18.4%	19.9%	4.6%	12.2%	34.4%	14.4%	18.3%

Source: Pennsylvania Higher Education Assistance Agency.

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90-2

The Reallocation of Financial Aid From Poor to Middle Income and Affluent Students 1978 to 1990

Thomas G. Mortenson

May 1990

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Prepared by American College Testing.

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THE REALLOCATION OF FINANCIAL AID
FROM POOR TO MIDDLE INCOME AND AFFLUENT STUDENTS
1978 TO 1990

Thomas G. Mortenson

SUMMARY

Since 1978, federal, state, and institutional student financial aid developments have consistently expanded programs, eligibility, and benefits for students from middle and affluent family income backgrounds. Moreover, often these enhancements have been financed by shifting money previously designated for low income students to these higher family income students. This study examines the form, influences, and results of this shift in student financial aid policy between 1978 and 1990.

Beginning with passage of the federal Middle Income Student Assistance Act in 1978, virtually every major change in federal, state, and institutional student aid has worked for the benefit of students from middle and high family income backgrounds:

- Federal aid has shifted from grants to loans.
- Pell Grant formula changes have extended middle income eligibility.
- College savings plans serve those who are able to save.
- New scholarship programs benefit the most affluent.
- Special Congressional Methodology treatments for dislocated workers and displaced homemakers benefit only those who are most affluent.
- The elimination of Social Security survivor's benefits for college hurts mainly low income students.
- During the last five years, state grants to undergraduate students based on need have grown at a lower rate than have grants not based on need.
- State universities have raised their admissions standards, thus excluding the poor disproportionately and preserving large institutional subsidies for middle income and affluent students.
- State pre-paid tuition and savings plans benefit only those who have the discretionary income to save for college and plans to do so.
- The growth in institutionally funded scholarship programs since 1980 has gone primarily to middle income and affluent students.

The distribution of financial aid to college freshmen reflects the above developments. During the 1980s, students from poverty family income levels experienced substantial declines in gift aid and increased use of loans. On the other hand, students whose family incomes were more than 200 percent of the poverty threshold reported less use of student loans and greater gift aid.

The shifting emphasis of student financial aid has occurred at the same time that substantial shifts have occurred in higher educational participation by students from different family income levels. Current Population Survey data on the college participation rates of unmarried 18 to 24 year olds between 1970 and 1988 by family income quartiles show great and growing disparity between the college participation rates of students from the bottom and top halves of the family income distribution. This disparity, greatest between the bottom quartile students and those from the top half of the family income distribution, closed somewhat between 1970 and 1980 but has widened steadily and significantly since then through 1988. This finding holds for males, females, whites, blacks, and Hispanics.

The shifting focus of student financial aid is not isolated. It is the result of decisions by policy makers at the federal, state, and institutional levels. At the federal level, the shifting focus appears to be a response to the plight of

Americans who have poorly prepared their finances to meet the costs of sending children to college. The savings rate for Americans reached an all-time low in 1987 and has recovered only slightly since then. Consumer installment debt as a proportion of disposable personal income is now (1989) at an all-time high, as is mortgage debt. Americans have been spending money faster than they have been earning it since the end of World War II. As a result, when their children reach college age, they are poorly prepared to absorb a large increase in expenses. Federal policy makers appear to have responded to their requests for help through a wide variety of existing program changes and new program initiatives. This refocusing has left programs originally focused on the poor inadequate to meet the needs of this group for assistance.

States remain the largest reservoir of middle income and affluent student financial aid. State appropriations to need-based student aid programs targeted on low income students constitute less than six percent of state support for higher education. Tuition and fees collected from students cover only about one-fifth of educational and general expenditures of institutions of higher education in the United States--a proportion that has not changed appreciably in several decades. The remaining four-fifths are covered by other institutional revenues, mainly state appropriations. These appropriations are allocated across students without regard to financial need; in fact, according to the National Postsecondary Student Aid Study (NPSAS), 58 percent of all undergraduates attend public institutions without further financial aid of any sort. Many of these students need no public subsidy at all to attend higher education.

The fastest growing source of financial aid for students (except for federal educational loans) is institutional gift assistance. In some states this source may surpass either federal or state gift aid programs. Institutional aid, however, appears to be awarded to students without regard to financial need. In the New York NPSAS study, for example, 60 percent of those who received federal Pell Grants came from families earning less than $20,000 per year, compared to 24 percent of those who received institutional grants or scholarships. In contrast, just 9 percent of the federal Pell Grant recipients were awarded to students whose parents earned more than $40,000 per year, compared to 48 percent of the institutionally awarded grants and scholarships. Indeed, institutional financial aid has grown remarkably during the 1980s--to the benefit of affluent students.

The refocusing of student financial aid programs from poor to middle income and affluent students has clearly benefited the latter, whose participation rates in higher education are at all-time highs. For students from the bottom quartile of the family income distribution, college participation rates have dropped and the difference from the rates for students from the top half of the family income distribution is greater now than at any time in the last two decades. The financial aid goal of equalizing higher educational opportunity for the most financially disadvantaged groups has not been achieved, and in fact during the 1980s the higher educational participation of the poor has greatly deteriorated relative to that goal and to what was accomplished during the 1970s.

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THE REALLOCATION OF FINANCIAL AID FROM POOR TO MIDDLE INCOME AND AFFLUENT STUDENTS 1978 TO 1990

Thomas G. Mortenson
American College Testing

I. Introduction

The Issue

The reallocation of student financial aid from poor to middle income and affluent students has been the most pervasive, persistent, and least discussed trend in student aid policy during the last dozen years. Beginning with passage of the federal Middle Income Student Assistance Act in 1978, virtually every major change in federal, state, and institutional student aid has worked for the benefit of middle income and affluent students.

- Federal aid has shifted from grants to loans.
- Pell Grant formula changes have extended middle income eligibility.
- College savings plans serve those who are able to save.
- New scholarship programs benefit the most affluent.
- Special Congressional Methodology treatments for dislocated workers and displaced homemakers benefit only those who are most affluent.
- The elimination of Social Security survivor's benefits for college hurt mainly low income students.
- Many states have created scholarship programs that benefit the least needy.
- State universities have raised their admissions standards, excluding the poor disproportionately, and preserving large state subsidies for middle income and affluent students.
- State pre-paid tuition and savings plans benefit only those who have the discretionary income to save for college and plans to do so.
- The growth in institutionally funded scholarship programs since 1980 has gone primarily to middle income and affluent students.

Moreover, under the constraint of limited budgetary resources during the 1980s, many of these changes have been financed by shifting money from the poor students for which they were originally intended to fund the expanded eligibility for middle income and affluent students.

The changes in federal and state aid programs to assist students from middle income backgrounds are the result of political pressures to meet their financing needs. Middle income and affluent families are more active in the political system than are the poor, and elected representatives reflect the concerns of those who gave them their jobs. Institutions allocate their own financial aid resources to maximize institutional self-interest. Neither reflects particularly well the original objective of need-based student financial aid as it was conceived in the 1965 Higher Education Act and in the subsequent landmark 1972 Education Amendments.

This paper describes the changes in federal, state, and institutional financial aid programs and policies that have refocused financial aid programs created in the design of student aid programs, who benefits from these changes, and who loses. This paper then describes the consequences for poor students in terms of higher educational opportunity as measured by higher education participation. Finally, this paper considers the political and organizational motivations for these changes.

Ultimately, we are left with one question:

> **Are we satisfied with the direction and consequences of the federal, state, and institutional financial aid policies that have been pursued since 1978?**

Changes in Student Aid

During the 1980s, college freshmen from different income backgrounds experienced changes in the kinds of student financial aid packages they have received to attend college. The poorest of students--from families whose incomes place them below the federal poverty threshold--have lost considerable grant assistance and aid from their families, and have had to rely increasingly on loans to make up the difference. Students from families whose incomes are more than 200 percent of the poverty threshold have had the opposite experience. These students are more likely to receive gift assistance and less likely to use loans to finance their higher educations. Because this finding is so striking, unreported, and challenging to our concept of the purpose of financial aid to help the needy, we will describe it in more detail before we proceed to the body of this paper.

In this analysis, we use the National College Freshmen Norms data collected annually by UCLA and published jointly with the American Council on Education. These data are limited to first-time, full-time college freshmen. Our analysis of these data is limited to the proportion of freshmen receiving aid of each type, at three income levels, over the period between 1978 and 1986. Unfortunately, the nature of the Norms data does not permit us to examine with any accuracy amounts of aid received by type.

Poverty income freshmen. Figure 1 shows the proportion of American college freshmen from families whose incomes and sizes place them below the federal poverty level that received financial assistance from their families (including their own earnings and savings), gift aid, and/or loan aid, between 1978 and 1986. Family support declined slightly during this period, especially after 1980, a decline caused by a reduction in parental support.

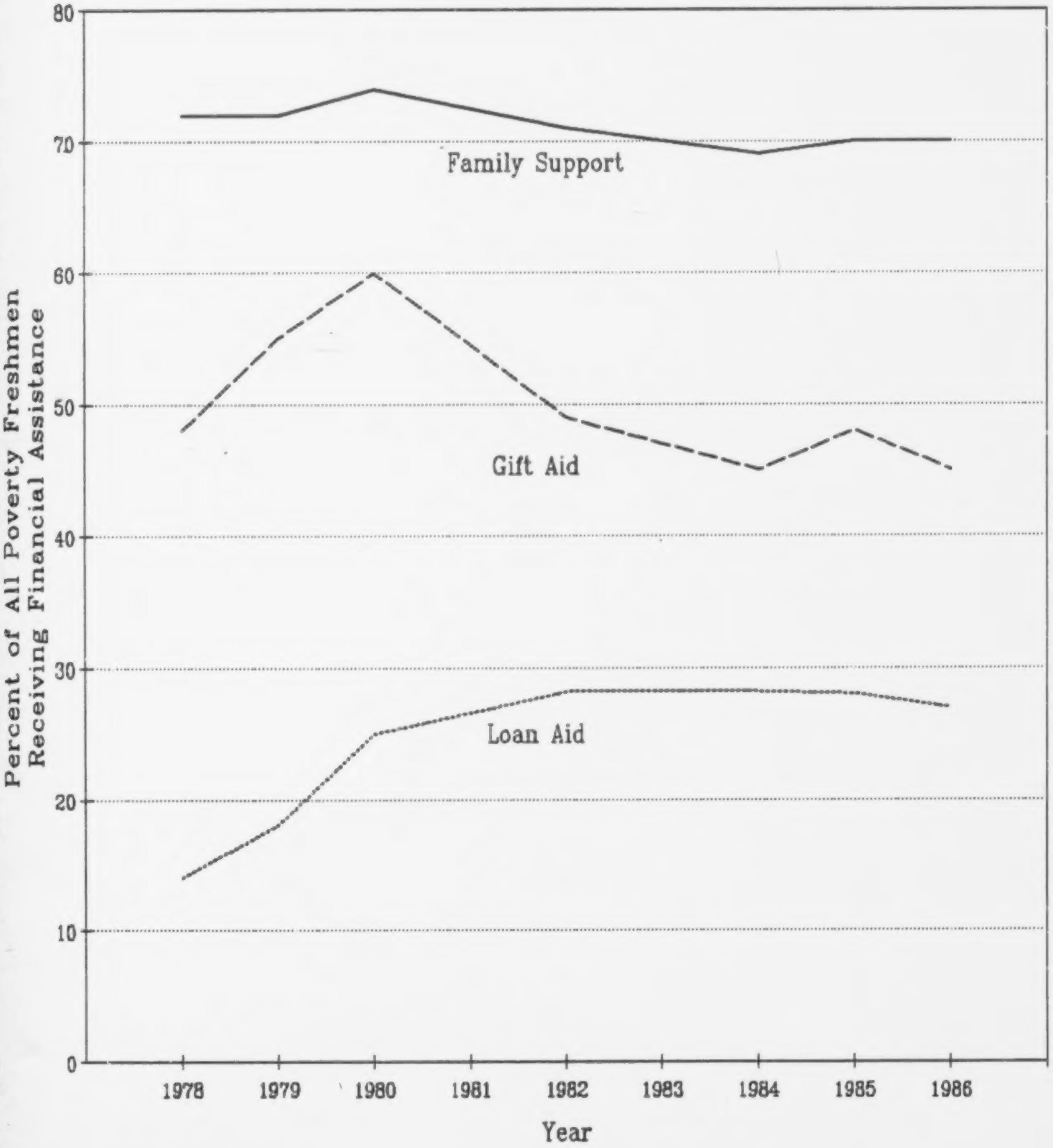
Note that under either the Pell or Congressional system of need analysis, students from families living at or below the poverty level are not expected to receive any help from their parents. Parental income up to the poverty level (Pell) or BLS lower standard budget (Congress) is protected from any assessment toward financing college attendance costs. Despite this expectation of no contribution, about half of all college freshmen from poverty income backgrounds report receiving financial support from their parents between 1978 and 1986.

The major changes are in gift and loan financial aid support. The proportion of college freshmen from poverty backgrounds that reported receiving gift aid declined from 60 percent in 1980 to 45 percent in 1984 and again in 1986. This finding is particularly striking given that all full-time college freshmen from

FIGURE 1

FINANCIAL AID BY SOURCE/TYPE FOR COLLEGE FRESHMEN FROM POVERTY INCOME FAMILIES

1978 TO 1986



Source: National College Freshmen Norms.

poverty backgrounds should qualify for maximum allowable Pell Grants. But in fact, the decline reported above is entirely attributable to the loss of Pell Grants for college freshmen. Between 1980 and 1986, the proportion of poverty freshmen reporting Pell Grants declined from 49 to 34 percent of all freshmen—a 15 percent decline. Poverty background freshmen also reported a 6 percent decline in SEOG support, a 6 percent decline in state scholarship/grant support, and a 2 percent decline in private grant support. College grants increased by 2 percent for this group between 1980 and 1986.

Modest income freshmen. "Modest" family income ranges from the federal poverty level to twice that level. The proportion of college freshmen from modest family income backgrounds who received financial assistance from families, gift aid, and loans is shown in Figure 2.

Between 1980 and 1986, the proportion of college freshmen from modest family income backgrounds reporting aid from their families (including their own earnings and savings) held nearly constant at around 88 percent (compared to about 70 percent of those from poverty income backgrounds). About 70 percent reported parental aid, 57 percent own savings, and 50 percent earnings from employment.

Freshmen from modest income backgrounds, like their fellow freshmen from poverty backgrounds, reported declining gift aid and increased use of loans to finance their collegiate educations. Between 1980 and 1986, the proportion reporting gift aid declined from 63 to 55 percent, Pell Grants declined by 16 percent, SEOGs by 2 percent, state scholarships/grants by 5 percent, and other private grants by 2 percent. The proportion of these freshmen reporting a college grant increased by 7 percent between 1980 and 1986.

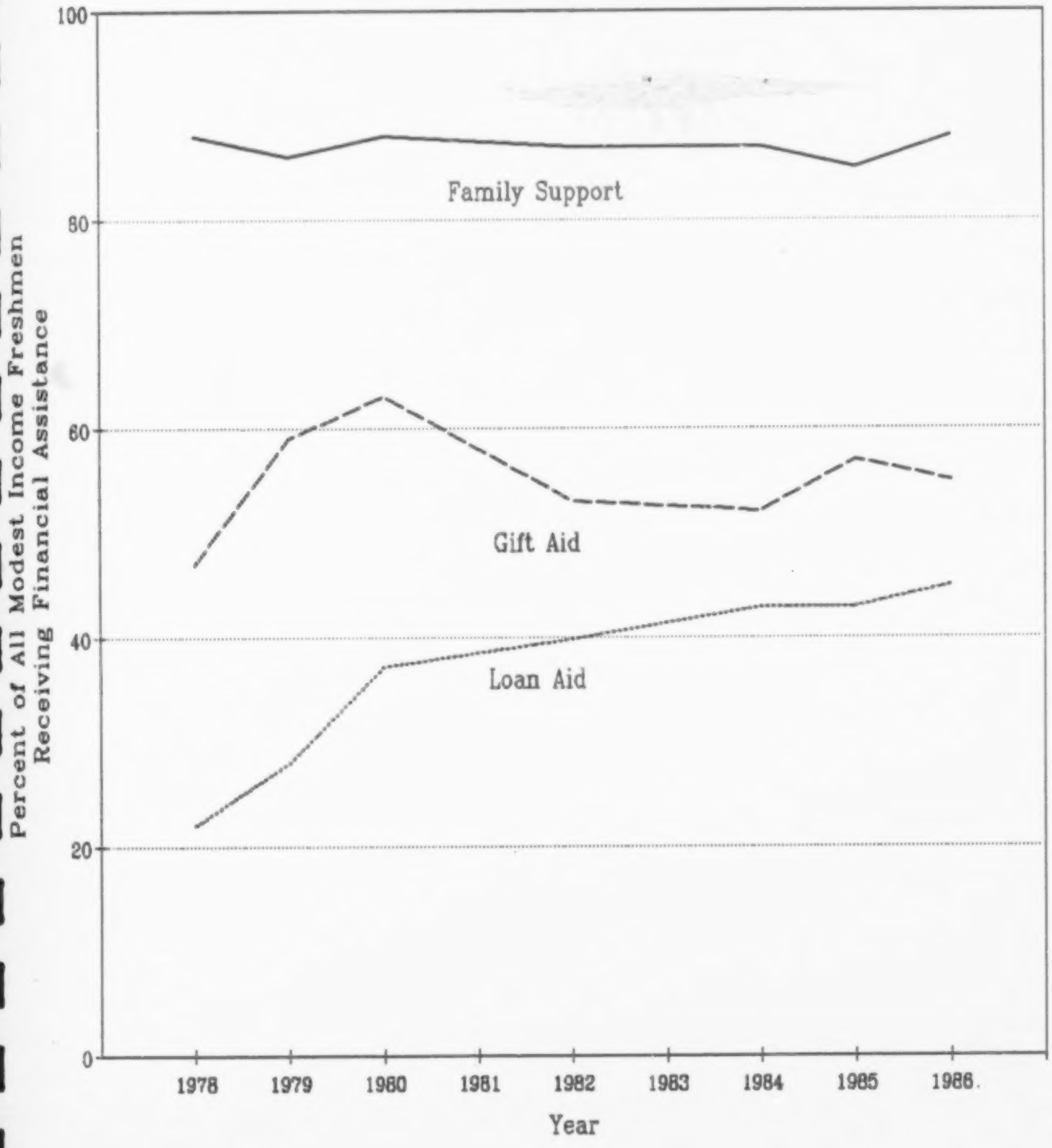
Loan use among freshmen from modest family income backgrounds increased steadily between 1978 and 1986, from 22 to 45 percent. Nearly all of this growth occurred in the Guaranteed Student Loan Program (now Stafford Loan Program), where program participation increased from 9 percent in 1978 to 36 percent by 1986.

Affluent income freshmen. In this paper, family incomes of more than 200 percent of the federal poverty threshold mean "affluent." Freshmen from these families have reported increased grant assistance and decreased loan use in the National College Freshmen Norms.

Grant assistance to affluent families increased from 23 percent in 1978 to 32 percent by 1980, and remained at about that level through 1986. However, this masks important shifts in the sources of grant assistance to affluent students. Federal assistance in the Pell and SEOG programs declined between 1980 and 1986, by 5 percent in the Pell program and 1 percent in the SEOG program. State assistance through grants and scholarships held constant. College grants doubled between 1978 and 1986, from 8 to 16 percent of affluent freshmen.

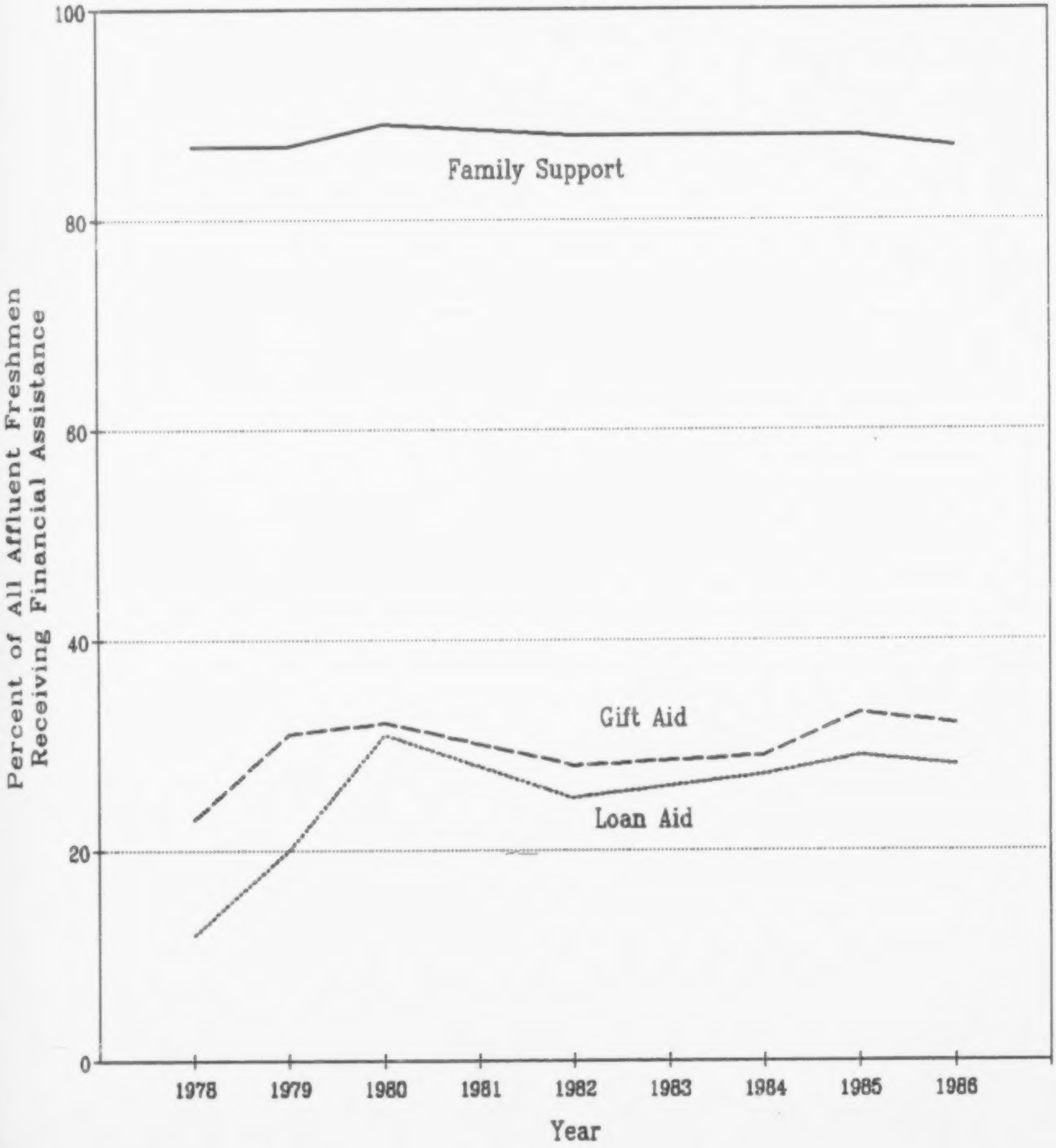
At the same time that gift aid to affluent freshmen was increasing, loan use was decreasing. Between 1978 and 1980, the proportion of affluent freshmen who reported receiving loans increased from 12 to 31 percent when income gaps were removed by the 1978 Middle Income Student Assistance Act. When these caps

FIGURE 2
FINANCIAL AID BY SOURCE/TYPE FOR COLLEGE FRESHMEN FROM MODEST INCOME FAMILIES
1978 TO 1986



Source: National College Freshmen Norms.

FIGURE 3
FINANCIAL AID BY SOURCE/TYPE FOR COLLEGE FRESHMEN FROM AFFLUENT FAMILIES
1978 TO 1986



Source: National College Freshmen Norms.

were later reimposed, the proportion of affluent freshmen reporting loans dropped back to 28 percent by 1986. Nearly all of these fluctuations are accounted for in one program: federally Guaranteed Student Loans, now called Stafford Student Loans.

The general patterns in the redistribution of gift and loan aid for college students are clear in the following findings from the National College Freshmen Norms data:

- The greatest cutback in grants received was for the lowest income group of freshmen—those from below the federal poverty line. The proportion of the most affluent freshmen receiving gift aid actually increased.
- The greatest increase in loan use was by modest income freshmen. Freshmen from affluent families actually reduced their use of loans between 1980 and 1986.

Thus, during the 1980s, gift aid has been reallocated from the poor to the affluent, and loan aid has been reallocated from the affluent to those of modest income background.

II. The Shifting Focus of Student Aid

Financial aid is funded from four sources: federal and state governments, institutions, and private sources. In this section we will examine changes in federal, state, and institutional student financial aid programs over the last decade and a half. Table 1 on the following page provides an overview of financial aid to college freshmen. It shows the proportion of college freshmen reporting receiving assistance from different sources and programs between 1974 and 1989. However, not all students experienced these trends. Students from different family income backgrounds were affected differently by the shifting focus of student financial aid over the last fifteen years.

Federal Student Aid Changes

About two-thirds of the dollars received by students under what is normally termed student financial aid is awarded through federal student aid programs. These funds come through a variety of programs, in many forms, and are awarded under different eligibility criteria, through different formulas, with different effects on student enrollment behavior. In this section, we explore the major changes in federal student financial aid programs beginning in 1978--who benefited from these changes and who lost.

The shift from gift aid to loans. In 1975, 76 percent of all federal aid was in the form of gifts such as grants, scholarships, and benefits. By 1988 the share of federal aid that was gift aid had dropped to 30 percent. Concommitantly, in 1975, 21 percent of all federal aid was in the form of loans. By 1988 the loan share of the total was 66 percent. This shift was largely the result of reduction or elimination in gift assistance programs such as Social Security survivor benefits and Veterans' benefits, and the expansion of federally guaranteed education loans made to students by private lenders.

Others have documented the federal shift from grants to loans (College Board, 1989). Here, we will describe its meaning in terms of the goal of student financial aid to enhance higher educational opportunity for those with financial need.

Student loans that must be repaid, along with fees and interest after leaving college, pose special problems for low income students when loans are substituted for grants. If grants remove financial barriers to college attendance, then loans not only reintroduce the barrier by requiring the student to repay the student aid after leaving school, but add two additional costs to college attendance for those who use loans to finance college educations. One kind of cost is financing, which includes origination and insurance fees, plus interest on the unpaid balance. Another kind of cost is risk, which is a special burden for low income students because they are often less well prepared academically to succeed in college than their more affluent peers. Financing and risk costs are unique to student loans, and the greater the use of loans the greater these burdens become to those who use them.

We have examined the question of the likely effect of financing and risk costs on the enrollment decisions of students in separate papers (Mortenson, 1988, 1989b, 1990). Both economic theory and attitudinal surveys indicate that

TABLE 1
Percent of First Time, Full Time American College Freshmen Receiving Financial Aid by Source of Funds
1974-1989

Source of Funds	Entering College Fall Term of: 1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Student and Family																
Parents	80.4	79.8	69.2	79.8	71.8	67.9	68.8	69.2	71.8	70.8	69.8	70.3	73.4	76.5	78.2	79.8
Summer Savings	56.6	52.7	39.7	55.8	47.1	43.0	43.1	43.5	41.3	40.5	45.5	48.4	50.1	54.9	54.4	54.3
Part Time Employment	70.0	64.0	49.5	68.4	24.9	24.3	24.8	23.6	23.7	23.7	28.0	30.8	33.3			
On Campus														18.5	19.4	19.8
Off Campus														24.1	23.3	24.3
Other Savings			20.5	17.9	18.6	19.0	18.5	18.4	19.1	22.1	26.0	28.4	28.6	28.6		
Full Time Employment	11.4	8.7	6.0	9.5	2.1	2.2	2.3	2.0	1.9	1.8	1.7	2.2	2.4	1.9	2.1	2.0
Spouse	2.0	1.6	1.1	1.5	.9	.8	.9	.9	.8	.9	.9	.9	1.4	1.1	1.2	1.1
Federal Programs																
Guaranteed Loan	10.0	9.5	6.8	13.1	10.4	13.2	20,9	26.3	20.8	21.8	23.4	23.0	25.4	22.0	20.1	22.7
Pell Grant	25.0	26.6	21.1	32.7	21.7	31.5	31.5	26.0	23.2	26.5	19.8	19.1	16.9	17.5	15.6	21.6
College Work-Study	12.5	12.2	9.3	15.9	11.2	11.7	14.5	12.0	11.8	13.4	9.4	10.0	10.4	9.8	6.6	10.1
NDSL	9.1	9.6	6.8	10.7	8.0	7.8	9.1	7.6	6.2	6.8	6.2	5.7	6.2	4.5	2.4	2.4
SEOG	6.3	6.3	5.3	9.2	5.7	7.2	8.0	5.7	5.7	6.8	5.4	4.8	5.3	5.8	3.7	6.0
Other Gov. Aid	6.0	5.8	3.7	6.0	3.9	3.7	3.8	3.7	3.0	3.6	2.1	1.8	1.9	1.7	2.4	2.5
Personal G.I. Bill	2.0	2.1	1.1	1.5	.7	.8	.9	.7	.6	.5	.5	.6	.7	---	---	---
Parents G.I. Bill	2.2	2.2	1.4	2.0	1.1	1.1	1.1	1.0	.8	.8	.6	.5	.5	---	---	---
Soc. Sec. Benefits	8.6	8.2	6.1	9.2	5.5	5.3	5.7	5.8	3.2	2.1	---	---	---	---	---	---
Institutional Programs																
College Grant			9.3	16.8	12.5	11.3	12.8	11.4	11.9	13.3	16.7	18.5	17.8	12.9	20.0	20.3
College Loan			3.3	5.4	3.6	3.4	4.0	3.7	3.5	3.7	3.5	3.7	4.0	5.3	5.8	7.7
State Programs																
State Grants	18.9	18.3	13.1	21.2	15.2	15.1	16.0	13.8	14.4	15.7	13.6	14.1	13.5	16.1	09.7	15.0
Private Programs																
Private Grant	19.7	18.0	6.4	10.4	7.4	6.8	7.2	6.8	7.3	7.4	6.3	5.6	6.9	9.5	9.1	9.2
Other Loans	6.8	6.1	3.7	6.6	3.7	3.5	4.0	4.2	4.1	4.0	3.8	3.5	4.1	5.0	5.4	6.3

Source: The American Freshman: National Norms for Fall 19XX, CIRP (ACE, UCLA).

substituting loans for grants will reduce higher educational opportunity for poor students. This effect, however, has not been demonstrated for students from middle and affluent family income backgrounds.

Modest and affluent family income students are more likely to be prepared academically for collegiate study than poor students and thus face lower risk costs in using loans to finance their higher educations. As shown in Table 2, the proportion of 1989 high school graduates who took the ACT Assessment and took a complete college preparatory core curriculum in high school increased with family income, from 34 percent of those from families with incomes of less than $6000 per year to about 56 percent of those from families earning $60,000 or more per year. This finding was true for each racial/ethnic group as well although different groups demonstrated considerably different degrees of college preparatory core curriculum completion.

Moreover, controlling for the core/non-core curriculum, the mean ACT Composite score increased with family income. For example, for all students who took the core curriculum, mean ACT Composite test scores increased from 16.7 for those from families with incomes of less than $6000 per year to 22.4 for students from families earning $60,000 or more per year.

More importantly, the expansion of gift aid to middle income students through federal, state, and institutional student aid programs appears to have reduced use of loans. In two Pennsylvania studies covering the 1980s, those with largest GSL cumulative indebtedness were middle income students in the early 1980s (Davis, 1985). By the late 1980s, however, the poorest students had the largest GSL cumulative indebtedness (Greene, 1989).

Significantly, middle income and affluent students have a more favorable attitude toward the use of loans to finance their educational investment (Mortenson, 1988), as shown in Figure 4. To the extent that attitude and behavior are linked, loans are more likely to meet middle income financial aid needs than they are for students from poor family income backgrounds. We may speculate that the poor have had a quite different relationship to loans than have middle income people. But the fact remains--loans are less favorably perceived by the poor than they are by people from middle and affluent family income backgrounds.

Pell Grant formula changes. Beginning in 1978, and continuing in 1986, Congress has altered the Pell Grant formula to expand middle income eligibility for Pell Grants. These changes include adjustments to arcane formula details such as assessment rates against discretionary income, allowances for state taxes, and allowances for multiple family members enrolled in college. What is not arcane is the effect of these changes on Pell Grant eligibility. The maximum income at which an applicant could still qualify for a Pell Grant was increased in 1979-80 as a result of the 1978 Middle Income Student Assistance Act, as shown in Figure 5.

Congress made even greater changes in the 1986 Amendments, which went into effect with the 1988-89 academic year. We can illustrate this with an example of families from different income levels of four members with two children in college in 1987-88 and 1988-89 as shown in Figure 6. If the family earned $8000, changes in the Pell Grant formula would have enabled each child to have received a $90 increase in their Pell Grants between 1987-88 and 1988-89. However, in another family earning $20,000, the Pell Grant for each child would have increased by $300. In a third family earning $32,000, the Pell Grant

TABLE 2

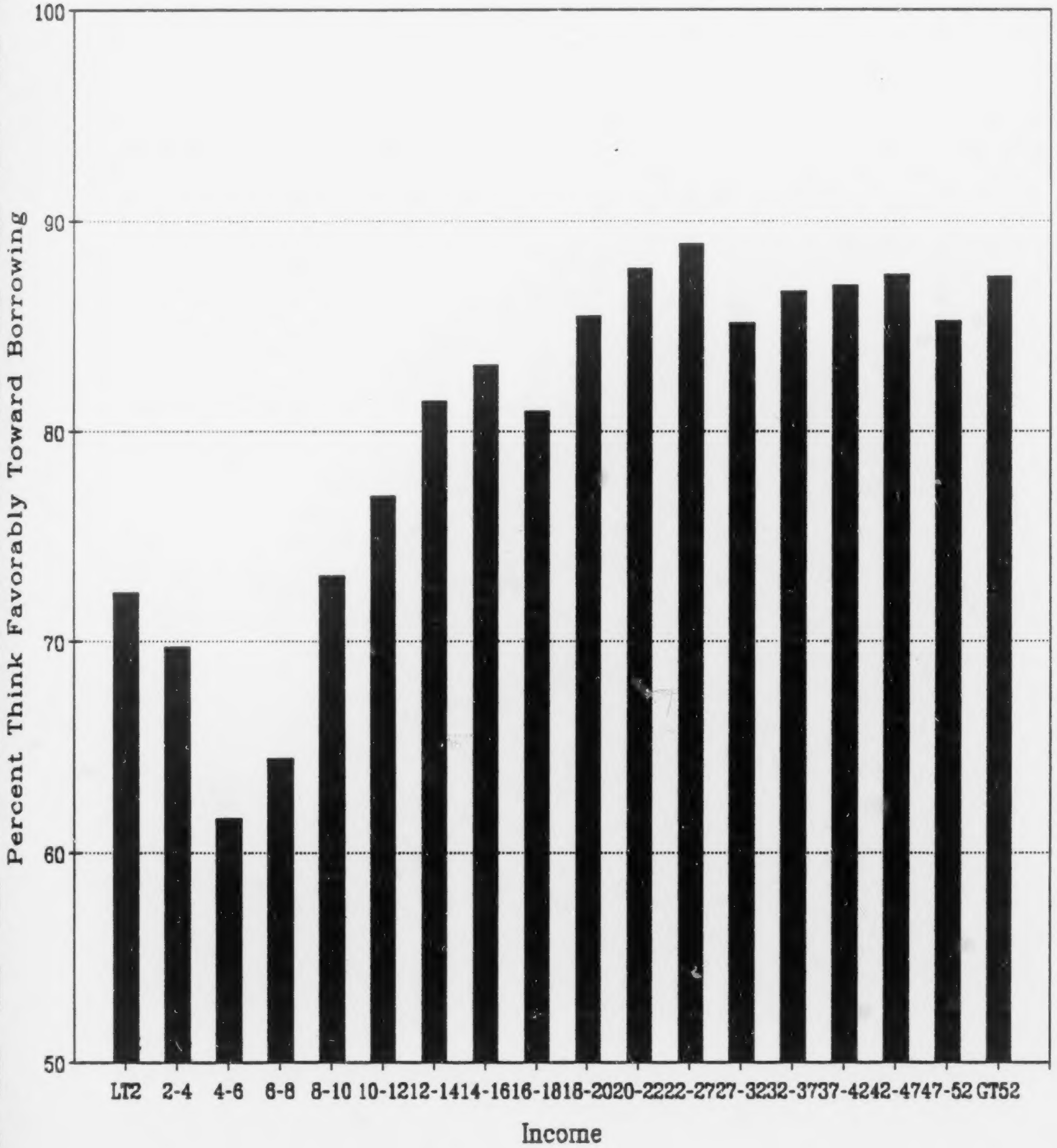
Mean ACT Composite Score
By Family Income, Race/Ethnicity, and High School Core/Non-Core Courses
1989 High School Graduates

	White			Black			Mexican-American			Asian-American			Hispanic			American Indian			All[b]			
Family Income	Core[a]	Non-Core	% Core	Core	Non-Core	% Core	Core	Non-Core	% Core	Core	Non-Core	% Core	Core	Non-Core	% Core	Core	Non-Core	% Core	Combined	Core	Non-Core	% Core
Less Than $6000	19.7	15.4	33.7	13.3	10.7	33.9	15.6	11.6	32.8	16.6	12.9	50.4	15.3	11.4	35.2	14.5	10.8	24.7	14.2	16.7	13.1	34.0
$6000 to $11,999	20.4	16.3	37.4	14.4	11.6	38.6	16.5	12.6	38.9	18.0	14.6	57.3	16.9	13.0	44.2	15.9	12.7	31.0	16.0	18.4	14.7	38.3
$12,000 to $17,999	20.9	16.8	39.8	15.0	12.0	39.7	17.3	13.4	39.4	19.3	16.0	58.1	18.2	13.9	46.4	16.8	12.9	31.8	17.2	19.6	15.7	40.1
$18,000 to $23,999	21.1	17.0	42.3	15.5	12.5	40.7	17.6	13.8	40.4	20.3	16.7	59.8	18.7	14.5	47.0	17.4	13.7	34.3	17.8	20.2	16.2	42.2
$24,000 to $29,999	21.3	17.3	44.4	15.9	12.8	42.8	18.5	14.4	41.4	21.1	18.1	60.2	19.0	15.2	54.1	17.7	14.8	36.0	18.4	20.6	16.7	44.3
$30,000 to $35,999	21.4	17.5	45.8	16.4	13.1	43.3	18.5	15.0	45.4	21.6	18.5	60.6	19.6	15.9	54.0	18.2	14.6	38.3	18.8	20.9	17.0	45.8
$36,000 to $41,999	21.6	17.7	47.6	16.9	13.7	44.5	19.0	15.2	44.0	22.7	19.2	60.7	21.0	16.8	55.9	18.3	14.6	37.7	19.2	21.3	17.4	47.5
$42,000 to $49,999	22.0	18.1	50.1	17.3	13.8	46.1	19.5	15.5	47.0	23.2	19.2	65.6	20.3	16.7	62.6	19.0	15.8	45.8	19.7	21.7	17.8	50.1
$50,000 to $59,999	22.2	18.4	52.2	17.4	14.2	48.1	20.1	16.1	51.8	23.7	20.8	64.8	21.0	17.5	57.0	20.7	15.4	40.3	20.1	22.0	18.1	52.1
$60,000 & Over	22.5	19.0	55.7	18.5	14.7	49.5	20.3	16.8	55.0	24.4	22.2	67.1	21.9	18.9	65.0	19.6	16.1	45.8	20.7	22.4	18.8	55.8
TOTAL	21.6	17.6	46.8	15.5	12.3	40.4	18.0	13.8	41.5	21.6	17.9	60.8	19.3	14.8	51.0	17.6	13.6	34.7	18.6	20.9	16.7	46.1
N		653,330			73,064			21,763			17,171			9,341			8,351				825,812	

[a] High School Core College Preparatory Courses: English: 4 years; Mathematics: 3 years; Social Studies: 3 years; Natural Science: 3 years.
[b] Includes in addition race: Blank, Other, Prefer not to respond.

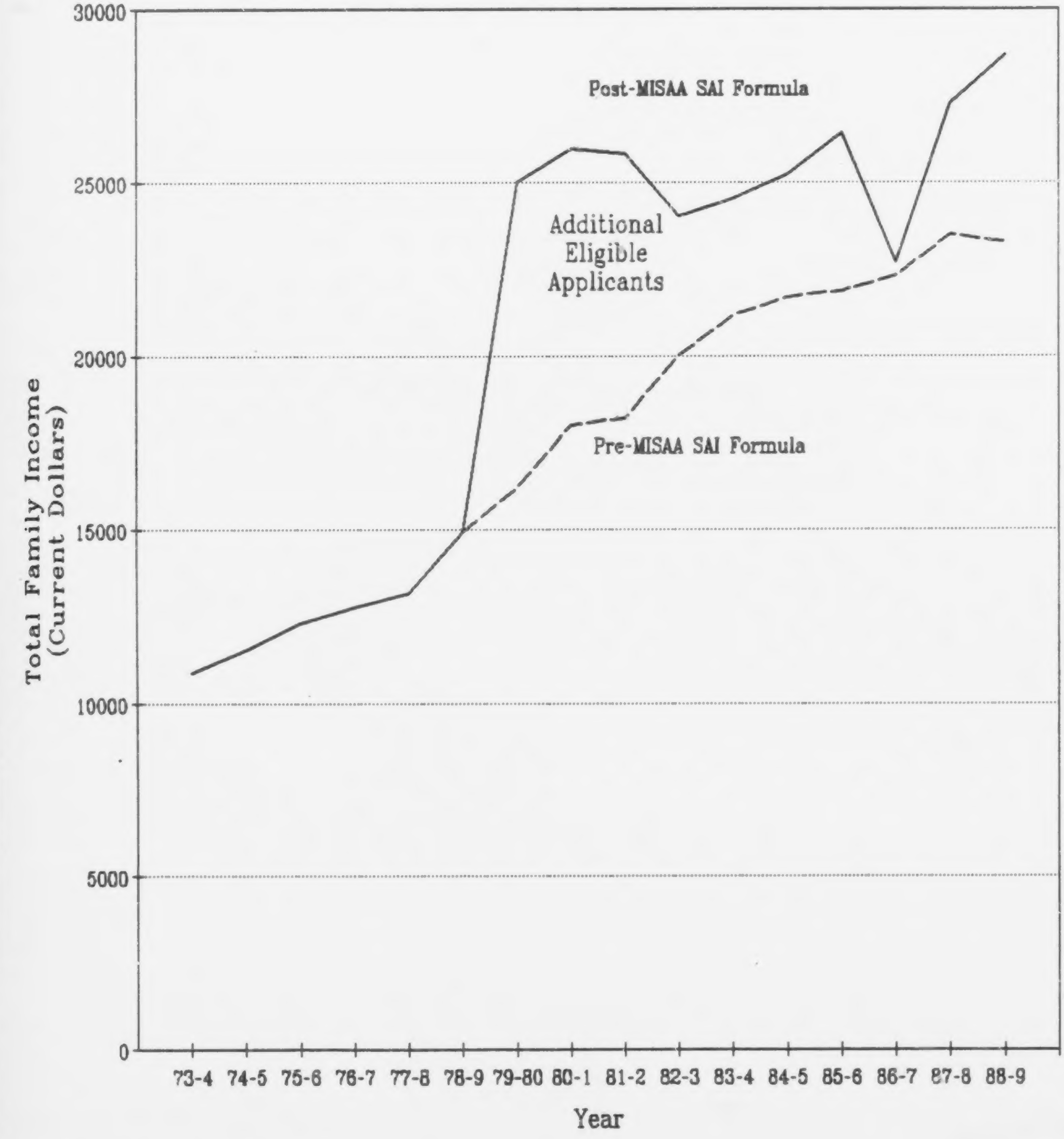
Source: ACT

FIGURE 4
WILLINGNESS TO BORROW FOR EDUCATIONAL EXPENSES BY INCOME
1983



Source: Survey of Consumer Finances, Federal Reserve System

FIGURE 5
MAXIMUM QUALIFYING FAMILY INCOME FOR A MINIMUM PELL GRANT UNDER PRE-MISAA AND POST-MISAA PELL SAI FORMULA
1973-74 TO 1988-89



Family size = 4, 1 in college, no assets.

eligibility for each child would have increased by $850 as shown in Figure 7. The third family, with four times the income of the first, received increases in Pell Grant eligibility nearly ten times that of the lowest income family.

Another illustration of the refocusing of the Pell Grant program is shown in Figures 8 and 9 for a family of two, one of which is a college student and the other a minor child. Between 1987-88 and 1988-89, Pell Grants for those with incomes of $8000 or less increased by $100. However, if the family earned $18,000 per year, the Pell Grant increased by $1350 as a result of changes enacted with the 1986 Amendments. We have summarized the effects of Pell Grant formula changes between 1987-88 and 1988-89 in Table A-1 in the Appendix.

Pell Grant maximum awards--available only to students from poverty level backgrounds--have increased much more slowly than have college attendance costs. Between 1975-76 and 1988-89, the average annual increase in the maximum Pell Grant was $62, compared to average annual increases in the costs of attending a public two-year college of $335, $317 at a public four-year college, and $653 at a private four-year college. One of the major reasons why the Pell Grant maximum award increased so slowly compared to increases in college attendance costs was that funds were diverted from low income Pell applicants to fund the increased eligibility for middle income Pell applicants resulting from Congressional changes in formulas made in 1978 and again in 1986.

Thus, Congressional action has refocused the Pell Grant Program from poor students to middle income students, with the cost of the increased middle income eligibility financed by lowered Pell Grant maximum awards to the poorest aid applicants.

Dislocated workers/displaced homemakers. The 1986 Education Amendments to Title IV of the 1965 Higher Education Act created two new classes of financial aid applicants--dislocated workers and displaced homemakers, and their children when filing as dependents--and provided special formulas that differed from the otherwise standard Congressional Methodology. Congress was apparently concerned that the financial need of students from families that had been disrupted by divorce or unemployment could be adversely impacted in need analysis by the use of family economic data that was no longer applicable, or distorted by adverse circumstance. Thus, the formulas written by Congress into the 1986 Education Amendments provided special treatment of income and home equity for the calculation of expected family contribution.

In ACT's analysis of the beneficiaries of these special formula treatments for dislocated workers and displaced homemakers, a consistent pattern emerged. Those most likely to benefit from the special formula treatments were, on average, more affluent than those who were least likely to benefit. The results of the ACT simulations are summarized in Table 3. In every case, financial aid applicants from families with incomes of 0 to $10,000 were least likely to have their expected family contributions (EFC) reduced by the special formula treatment. Aid applicants with family incomes of more than $20,000 per year were anywhere from four to ten times more likely to have their expected family contributions reduced by the special formula treatments, and hence qualify for more financial aid. The median family income of those whose expected family contributions were reduced by $100 or more through the special formula treatments were usually two to three times higher than those whose expected family contributions were affected by less than $100 (Mortenson, 1989a).

FIGURE 6
PELL GRANT ELIGIBILITY AT PUBLIC FOUR-YEAR COLLEGE FOR DEPENDENT, FAMILY SIZE OF 4, 2 IN COLLEGE IN 1987-88 AND 1988-89

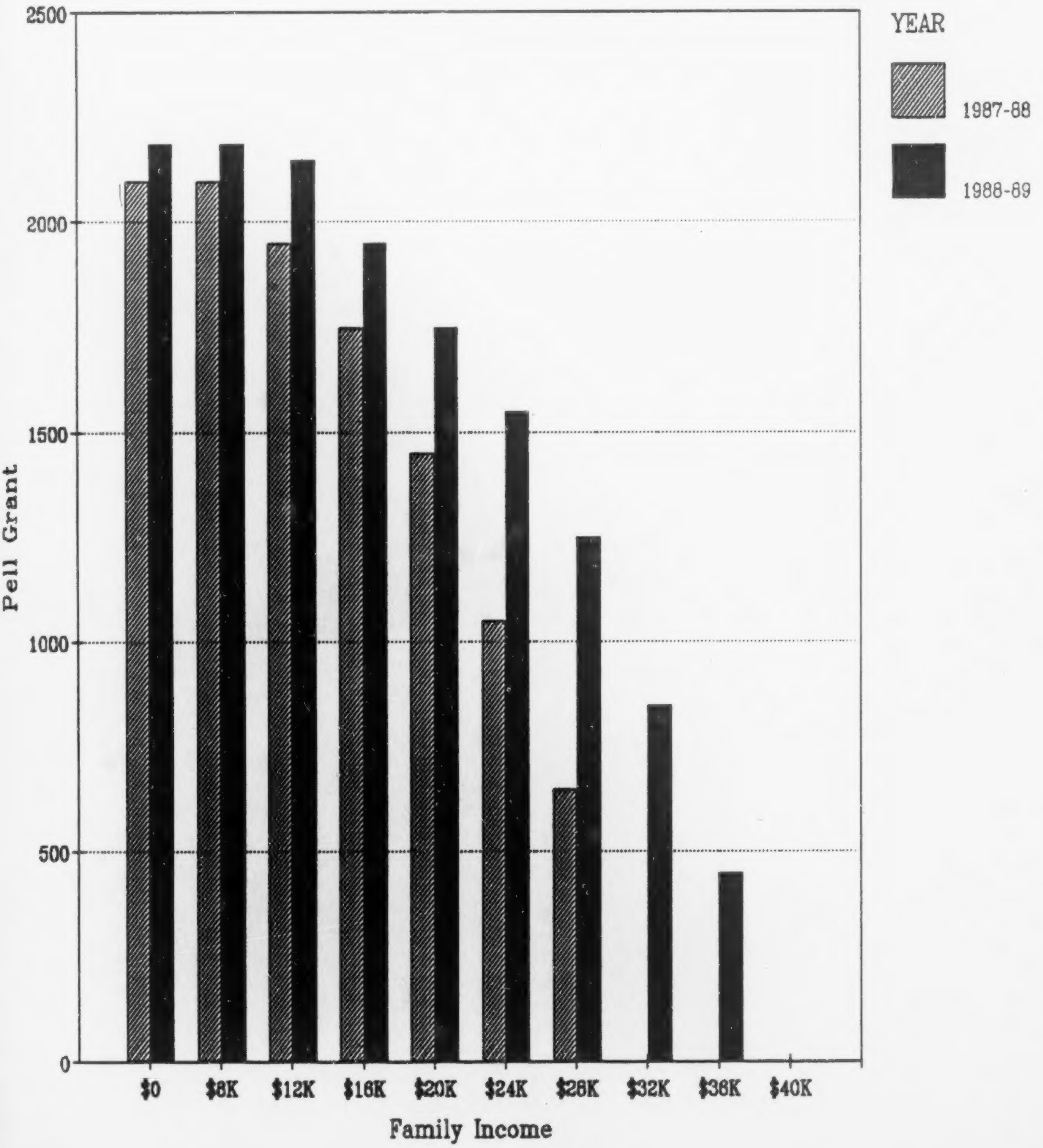


FIGURE 7
CHANGE IN PELL GRANT ELIGIBILITY AT PUBLIC FOUR-YEAR COLLEGE FOR DEPENDENT, FAMILY SIZE OF 4, 2 IN COLLEGE BETWEEN 1987-88 AND 1988-89

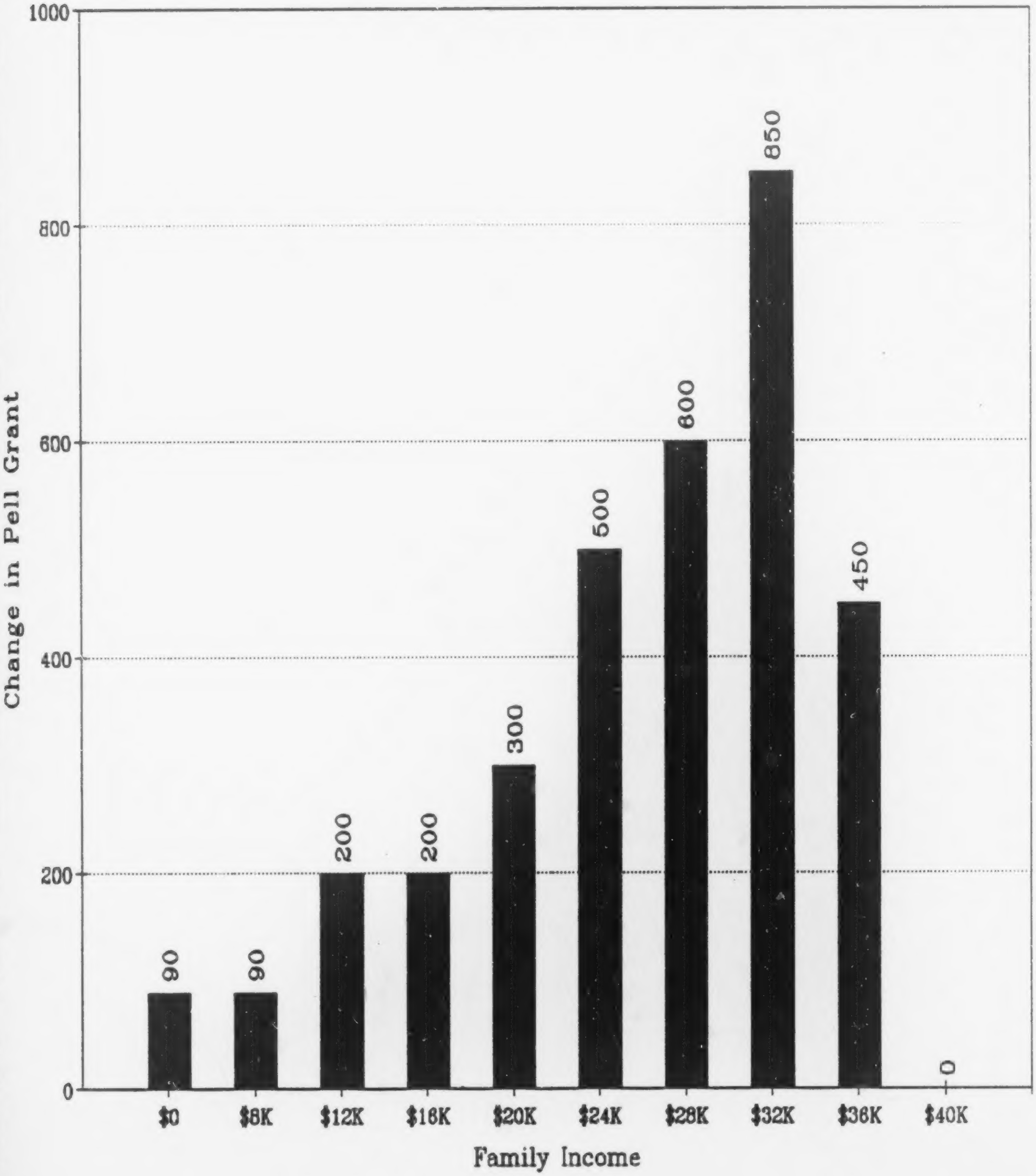


FIGURE 8
PELL GRANT ELIGIBILITY AT PUBLIC FOUR-YEAR COLLEGE FOR UNMARRIED INDEPENDENT, FAMILY SIZE OF 2, 1 IN COLLEGE IN 1987-88 AND 1988-89

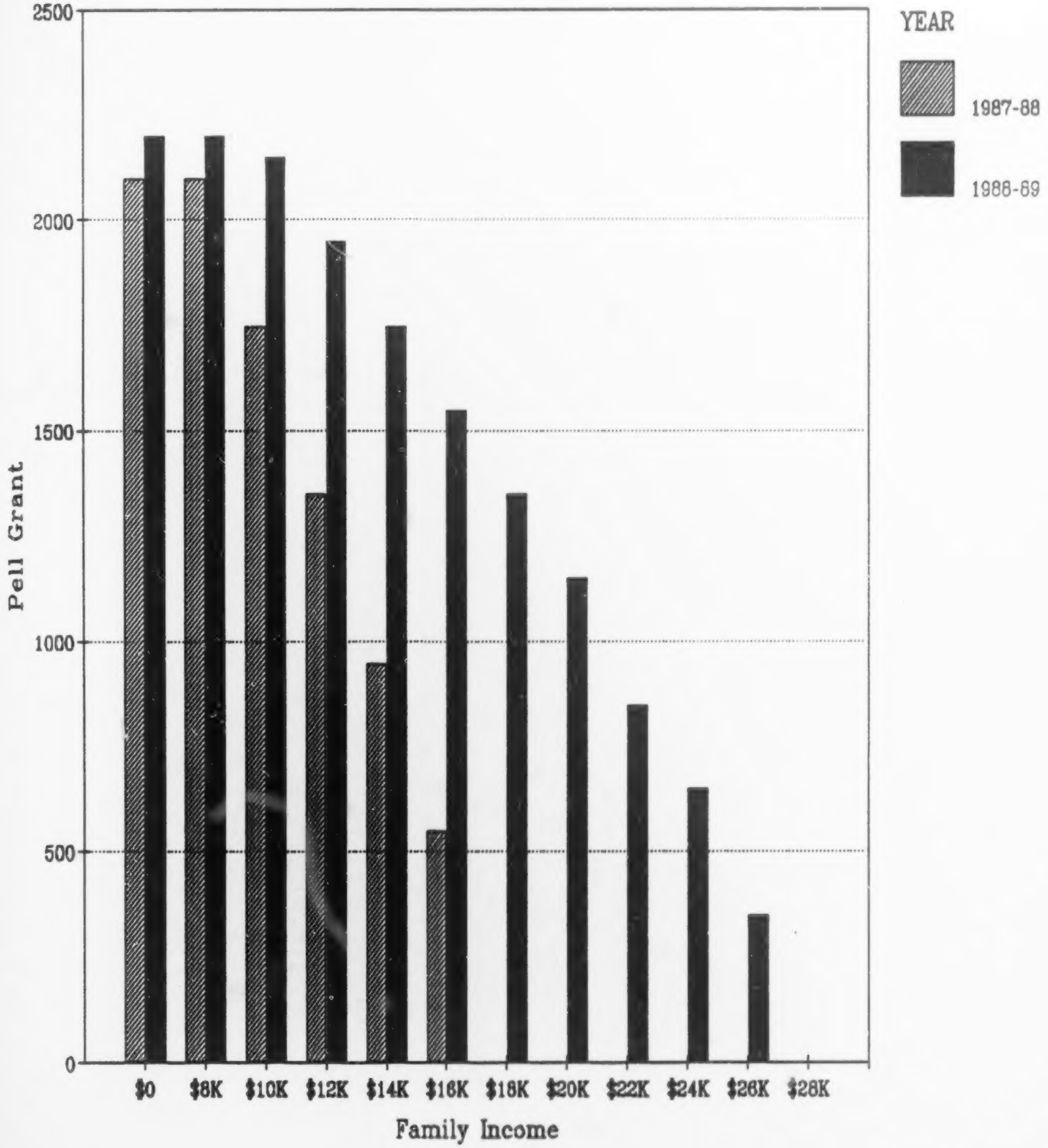


FIGURE 9
CHANGE IN PELL GRANT ELIGIBILITY AT PUBLIC FOUR-YEAR COLLEGE FOR UNMARRIED INDEPENDENT, 1 CHILD, 1 IN COLLEGE BETWEEN 1987-88 AND 1988-89

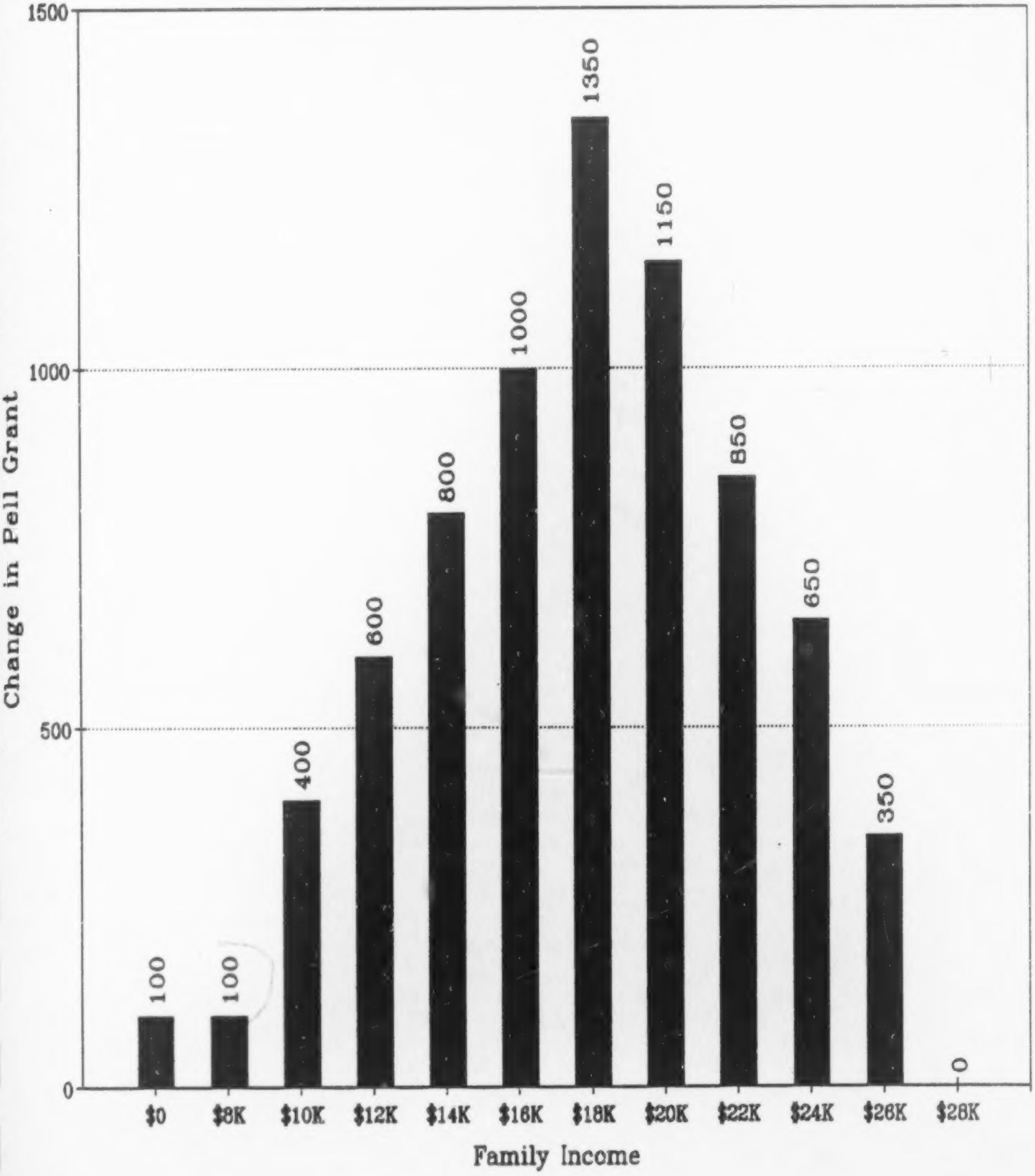


TABLE 3
Formula Simulation Results for Dislocated Workers and Displaced Homemakers

Change in Expected Family Contribution	Negative Income	$0 to $10,000	$10,000 $20,000	$20,000 $30,000	$30,000 $40,000	$40,000 $50,000	Over $50,000	Median Income
			Total Base Year Family Income					
Dependents of Dislocated Workers (N=16,153)								
-$101 or more	2%	1%	5%	14%	12%	7%	7%	$31,334
-$100 to +$100	5%	17%	16%	4%	1%	0%	0%	$9,708
+$101 or more	1%	1%	2%	2%	1%	0%	0%	$20,342
Reduced Expected Family Contribution:	30%	7%	22%	71%	88%	94%	97%	
Independent Dislocated Workers (N=11,164)								
-$101 or more	31%	3%	5%	5%	2%	1%	0%	$15,976
-$100 to +$100	34%	11%	3%	0%	0%	0%	0%	$6,259
+$101 or more	4%	1%	0%	0%	0%	0%	0%	$8,301
Reduced Expected Family Contribution:	45%	20%	58%	91%	97%	99%	90%	
Dependents of Displaced Homemakers (N=14,287)								
-$101 or more	2%	3%	5%	7%	4%	2%	2%	$24,209
-$100 to +$100	11%	34%	15%	6%	3%	2%	1%	$7,352
+$101 or more	1%	0%	1%	1%	0%	0%	0%	$21,250
Reduced Expected Family Contribution:	16%	7%	22%	50%	54%	57%	59%	
Independent Displaced Homemakers (N=14,665)								
-$100 or more	6%	3%	1%	1%	0%	0%	0%	$7,289
-$100 to +$100	54%	27%	3%	1%	0%	0%	0%	$4,691
+$100 or more	2%	0%	0%	0%	0%	0%	0%	$8,046
Reduced Expected Family Contribution:	10%	11%	34%	45%	50%	48%	45%	

Source: ACT.

Clearly, the special formula treatments for dislocated workers and displaced homemakers primarily benefited the more affluent aid applicants that qualified for these special treatments. But how did this happen? The answers were derived from the details of the formulas. For example, for independent dislocated homemakers—typically recently divorced women—87 percent reported that they had no home equity at all. Thus, removing home equity from the EFC calculation could not help them. Removing home equity could only reduce the EFCs for the 13 percent of the aid applicants who had any home equity to report, and their reported incomes were higher than those who had no home equity.

There was an even more perverse consequence of this well-intentioned provision: the reduction in expected family contributions that the generally more affluent received under special treatment resulted in increased need and financial aid eligibility. In terms of federal student aid, this qualified the selected beneficiaries for greater levels of campus-based awards through programs for which Congress reduced real levels of funding. Thus, whatever additional federal aid the benefited dislocated workers and displaced homemakers received was simply reduced to the poorer aid applicants who had used it previously.

Other federal changes. The federal shift from grants to loans after the mid 1970s, and the expanded Pell Grant eligibility legislated in 1978 and 1986, are the major federal decisions refocusing student financial aid from poor to middle and affluent family income background students. But other decisions are also worth noting.

The phase-out of Social Security survivor benefits for those over age 19 enrolled in college was originally justified on the grounds that eligibility for federal student financial aid should be need-tested. Students who would have been eligible for benefits under this program were told that henceforth they would qualify for equivalent benefits under the Pell Grant and other federal grant programs if they were needy. Thus, Social Security survivor benefits for those over age 19 were phased out between 1981 and 1985.

In fact, Social Security survivor benefits went primarily to students from low family income backgrounds. Until they were phased out, these benefits were increased along with inflation. However, before the phase-out period, the maximum Pell Grant for which the needy former beneficiaries were eligible actually decreased, from $1800 in 1979-80 to a low of $1670 by 1981-82. Between the beginning of the phase-out of Social Security survivor benefits and 1987-88, the Pell Grant maximum increased by 26 percent. During that same period of time, institutional charges in public four-year institutions increased by 50 percent and in private four-year institutions by 71 percent. Thus students previously eligible for Social Security survivor benefits were moved first into the Pell Grant Program, and when Pell Grants did not keep up with college attendance costs they were moved into educational loan programs where they could borrow, but later repay with interest, benefits which had previously been gifts.

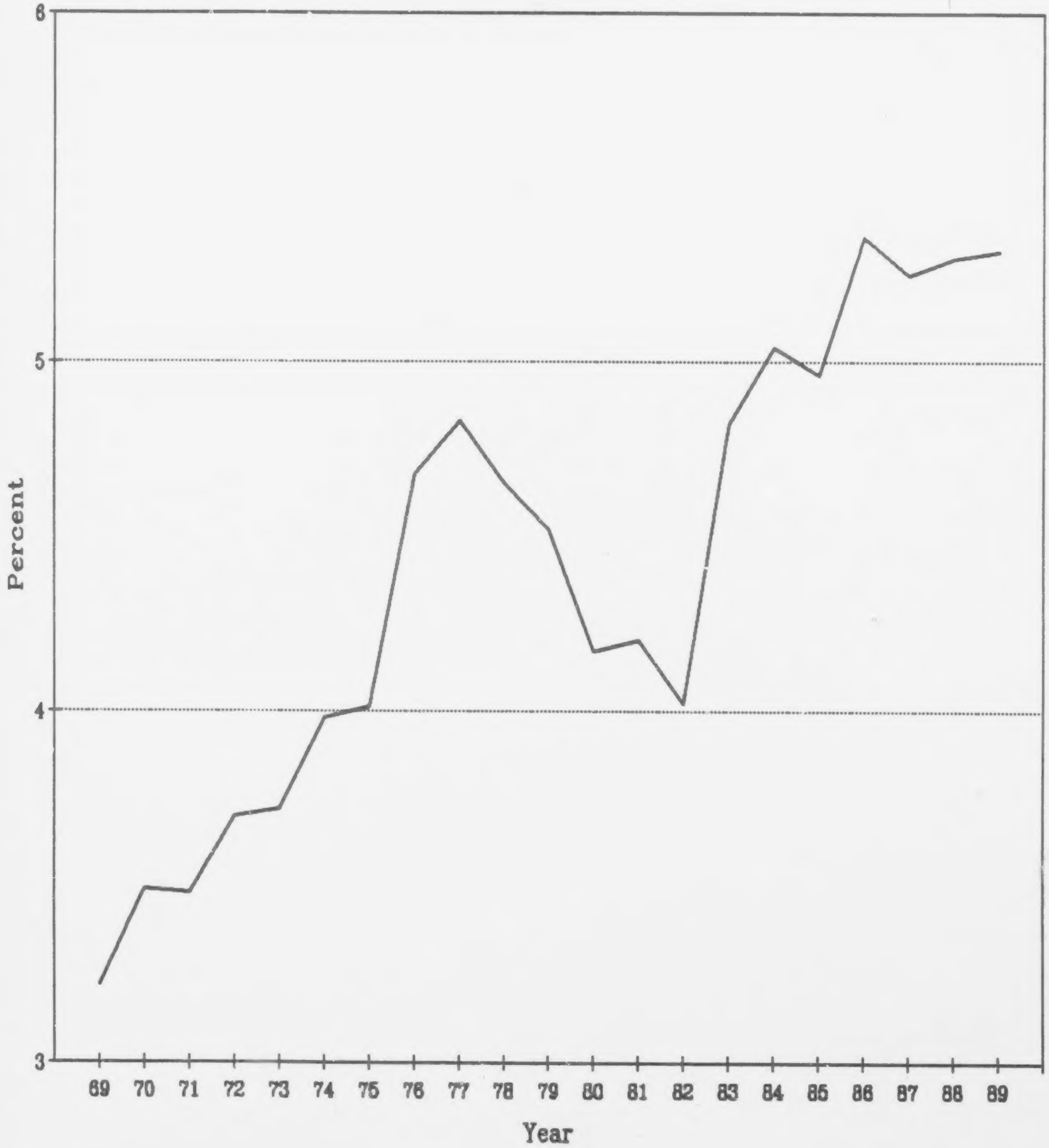
A more telling statistic is the federal provision for gift aid to students, including grants, scholarships, and benefits. In 1980-81 it stood at $6.7 billion. By 1988-89 it had dropped to $6.0 billion. Even this level is below the 1975-76 level of $6.5 billion, all in current dollars.

State Student Aid Changes

Need-tested state subsidies. States provide by far the largest share of governmental funds used to support higher education. Only a small portion of these funds is allocated to students directly as grants. This proportion generally increased between 1969 and 1986, from 3.2 to 5.4 percent of state appropriations (Figure 10). Since 1986 this proportion has remained flat. Only in a few states do appropriations for student grants constitute more than ten percent of state appropriations for higher education. Vermont and New York are the notable exceptions (Mortenson, 1983).

But not all grants to undergraduates are need-based. Since 1983-84, the annual NASSGP survey has reported that about 90 percent of undergraduate grants made by states are need-tested. And there is some trend to these data. In 1985-86, 9.0 percent of undergraduate grants were not need-tested. This

FIGURE 10
STATE SUPPORT FOR STUDENT FINANCIAL AID GRANTS AS A PROPORTION OF STATE SUPPORT FOR HIGHER EDUCATION
1969-70 TO 1989-90



Sources: NASSGP and Chambers annual surveys.

proportion has increased steadily to 11.2 percent by 1989-90. The dollars are small, but the trend is consistent with the trend in the reallocation of federal and institutional financial aid. Since 1983-84, states have increased their need-based grant appropriations to undergraduates by 53 percent, and to non-need-based grants by 82 percent. These non-need-based grants are often awarded on the basis of academic talent or promise, and therefore go disproportionately to students from relatively affluent backgrounds.

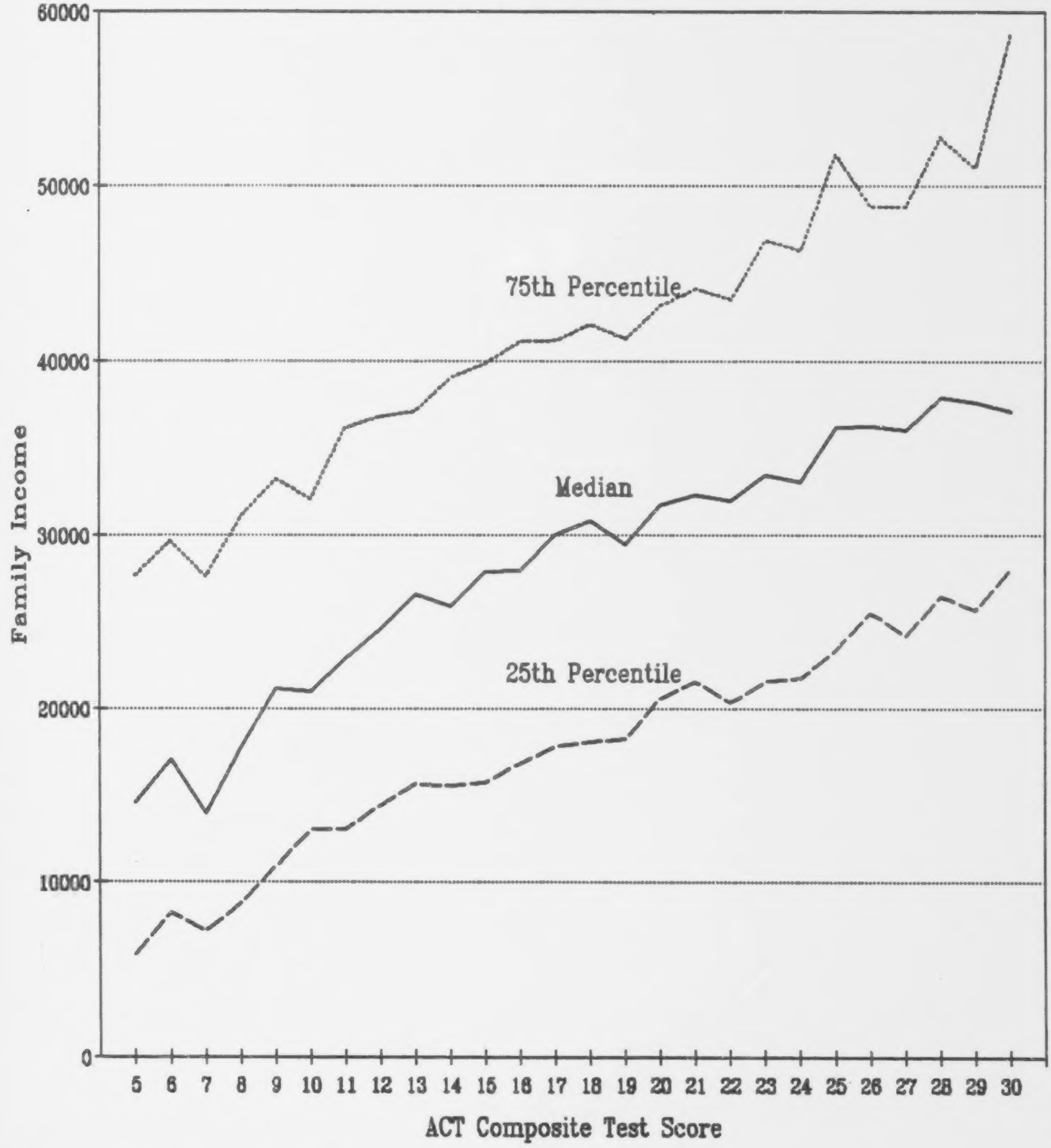
State subsidies to institutions. The bulk of state subsidies is allocated to institutions which use them to reduce tuition charged to all students without regard to each student's need for the subsidy. As a result, many students in public institutions receive large state subsidies for their educations, subsidies for which they would not qualify under a financial need test. In the National Postsecondary Student Aid Study, 51.4 percent of all undergraduates received no financial aid to attend college. This proportion increased to 58.6 percent in public institutions, and to 78.7 percent for high family income dependent students in low cost institutions (Stowe, 1989).

Moreover, the institutional subsidy is received only by students who are filtered through institutional admissions standards. Where these standards are selective, the state subsidy is reserved for students who typically come from more affluent family income backgrounds. We may illustrate this relationship with data prepared from ACT assessment and financial aid files. Figure 11 plots family income as a function of the ACT Assessment Composite score. For example, the median family income for those with ACT Composite scores of about 6 is about $15,000, while the median for those with scores of about 29 is about $38,000. Thus, institutions that practice selective admissions generally attract students from more affluent family income backgrounds. And the more selective the admissions standards, the higher the family income backgrounds of those it admits.

This is particularly true at public senior colleges and universities that practice selective admissions--admissions that may have become even more selective during the 1980s while national attention has been focused on quality of education. Generally speaking, institutions that raised their admissions standards during the 1980s experienced decreased need for student financial aid, either traditional financial aid or institutional subsidies used to keep tuition charges low.

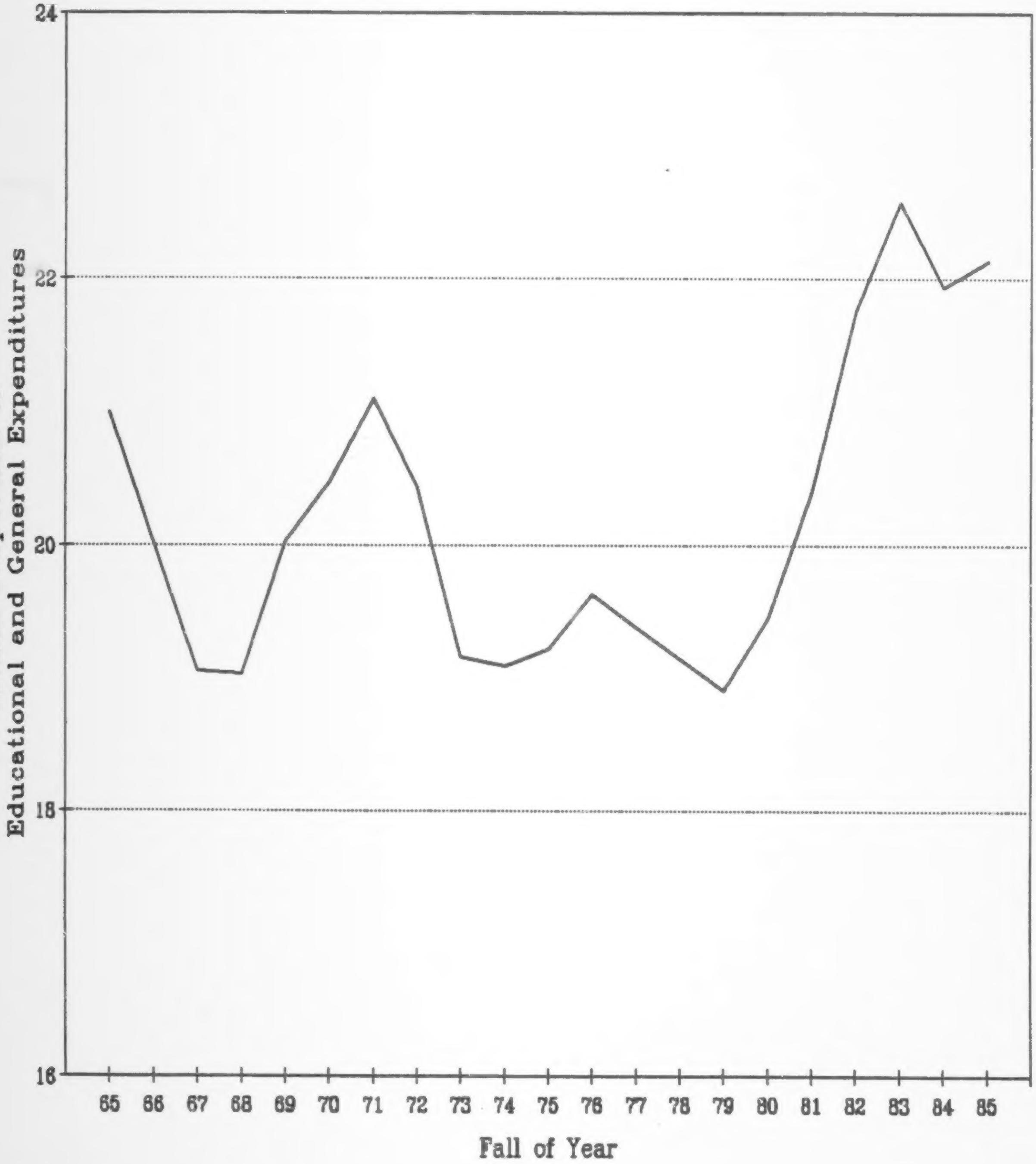
Tuition coverage of educational and general expenditures. Income from tuition and fees in public institutions of higher education covers about one-fifth of what these institutions spend to educate their students. As shown in Figure 12, this proportion fluctuated between 19 and 21 percent of educational and general (E&G) expenditures of public institutions (less expenditures for research and public service) between 1965 and 1981. Since 1982, however, this proportion has increased slightly to about 22 percent of E&G as a result of the impact of economic recession in the early 1980s on state revenues. The state revenue shortfalls during the recessions of the early 1980s apparently caused a 2 percent shift in the financial responsibility for public higher education from state taxpayers generally to students and their families in particular (and the financial aid system as well). The main finding, however, is that about four out of the five dollars used to educate a public college student come from sources other than the student and his or her family and are awarded to the student without regard to demonstrated financial need for the subsidy.

FIGURE 11
FAMILY INCOME BY ACT COMPOSITE SCORE FOR DEPENDENT COLLEGE FRESHMEN
1989



Source: ACT 1988-89 Merged AAP and CAF File.

FIGURE 12
TUITION COVERAGE OF EDUCATIONAL AND GENERAL EXPENDITURES IN PUBLIC INSTITUTIONS OF HIGHER EDUCATION
1965-66 TO 1985-86



Note: E&G less Research and Public Service.

In summary, state support for higher education may be characterized mainly as allocated across all students through institutional subsidies used to reduce the price charged to all students without regard to financial need. This effectively concentrates the states' higher educational subsidies on the more affluent, who characteristically graduate from high school, enter college, choose more costly colleges, and persist longer in higher education than students from low family income backgrounds.

The proportion of state higher educational appropriations targeted on students increased between 1969 and 1986, but still only amounts to about 5 percent of state appropriations for higher education. This share has remained flat the last four years. Within this share, however, states have gradually shifted student grants away from needs tests and toward programs that allocate awards on bases likely to favor students from more affluent family income backgrounds.

Savings programs. Since 1986 more than 30 states have enacted legislation creating some form of tuition prepayment or educational savings program (McGuinness and Paulson, 1990). These programs are designed to encourage families to "prepay" part of the cost of attending college before the child reaches college age, and to thereby reduce the later costs paid out of then-current income or deferred obligation.

The savings programs are logically directed toward families that have both the ability and desire to save for college attendance costs. A survey of financial decision makers in American families for Money magazine found that unlike most financial areas, financial concern about college increased with family income (Figure 13). Sullivan (1990) analyzed savings patterns of parents with children under 18 years from the 1986 Survey of Consumer Finances. She found that parents without any savings had an average income of $19,963, compared to $33,039 for parents with savings but none for college, and $42,486 for parents who were saving for college.

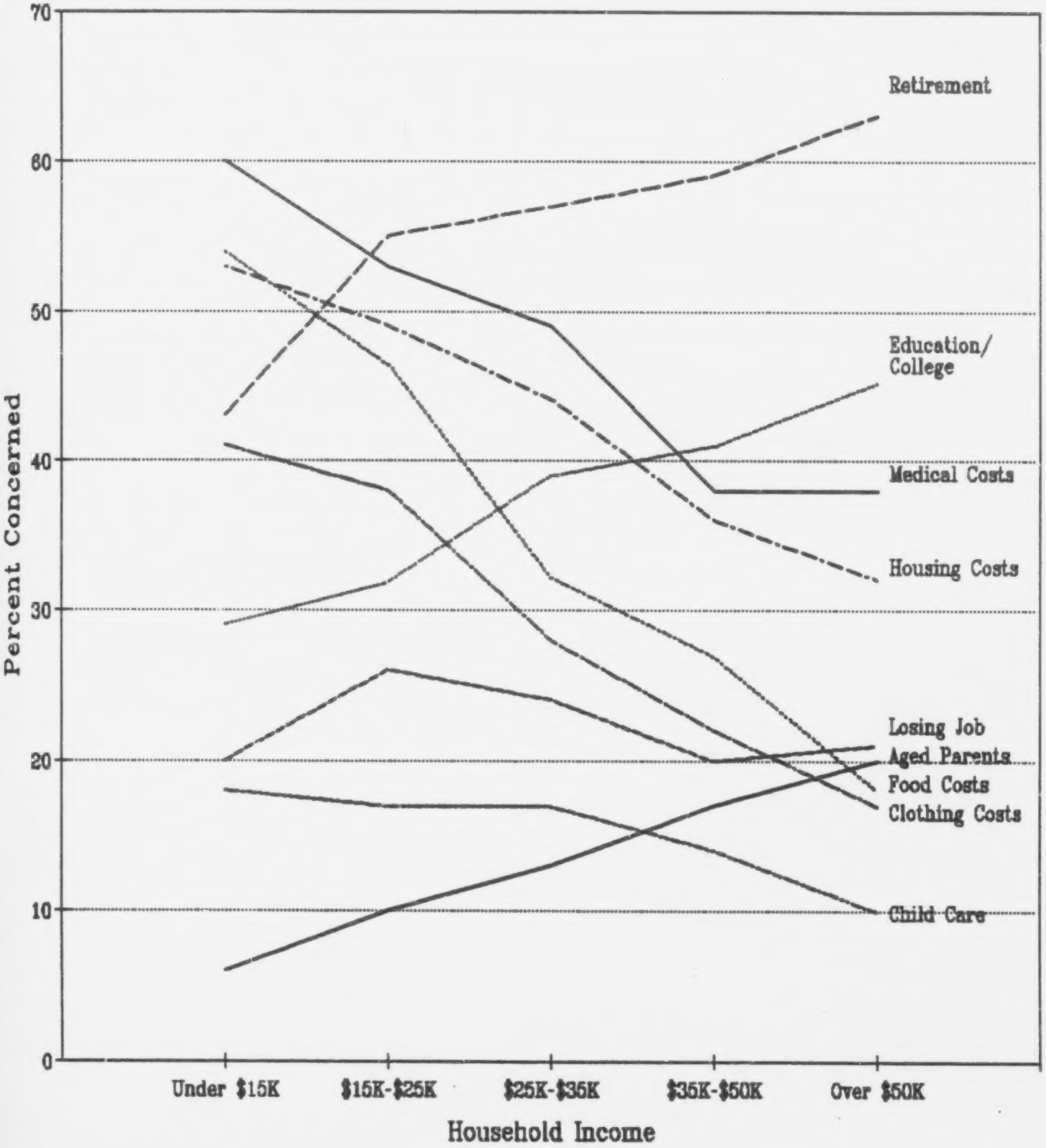
Savings programs are directed toward families with the ability to save for future college attendance costs of their children. They cannot be expected to influence the savings behavior of families from low income backgrounds. However, savings programs used by affluent families can help low income families indirectly by taking some political pressure off policy makers to expand financial aid programs to higher income aid applicants when such families have not saved for these expenses.

Institutional Student Aid Changes

Institutionally funded student financial aid has been one of the few financial aid growth stories during the 1980s. Along with federally guaranteed educational loans, institutional grants have grown in size to nearly match federal and state grant assistance in some states. This growth was first reported to be a response by institutions to the declining purchasing power of federal student aid (Green, 1988). We have since come to learn this was not the case.

Through the National Postsecondary Student Aid Study (NPSAS) we have come to learn to what kinds of students institutions allocated their own grant assistance: it was not directed to the populations that were targeted by federal and state student aid programs. The governmental grant programs were targeted

FIGURE 13
WHICH FINANCIAL AREAS DO YOU WORRY ABOUT?
BY HOUSEHOLD INCOME
1988



Source: Americans and Their Money, Money Magazine.

on the lowest income segments of the population. Institutional grants have gone disproportionately to students from more affluent family income backgrounds. Institutional student financial aid appears to be directed more toward influencing institutional choice rather than higher educational access behaviors of students.

In this section we will document the growth in institutionally funded student financial aid during the 1980s and its allocation to students from different family income levels.

Growth in institutionally funded student aid in Illinois. The Illinois Student Financial Aid Survey, conducted annually since the early 1970s, collects information from all public and private higher educational institutions in Illinois on the amounts, types, and sources of financial aid received by Illinois undergraduate and graduate students. The Illinois Survey is one of the richest sources of information available for the study of federal, state, and institutional student financial aid.

Table 4 provides information on the number of gift aid recipients and amount of gift aid Illinois undergraduates received from the major grant programs during the last decade. Among these programs the greatest growth in students aided was through institutionally funded gift aid: Pell grant recipients increased by 4,500, SEOG grant recipients decreased by 1,600, state grant recipients decreased by 3,600, and institutional grant recipients increased by 27,300. Moreover, during the last decade the growth in dollars provided through institutional grants was greater than from federal or state sources: Pell Grant dollars increased by $53 million, Illinois grant dollars by $56 million, and institutional grant dollars by $84 million. In Illinois, nearly all of this growth occurred in private institutions due to strict state controls on institutional aid awards in public universities and the absence of institutionally funded grant programs in Illinois community colleges.

TABLE 4
Illinois Undergraduate Grant Aid
1979-80 to 1988-89

Academic Year	Pell Grants Number (000)	Pell Grants Dollars (000,000)	SEOG Grants Number (000)	SEOG Grants Dollars (000,000)	State Grants Number (000)	State Grants Dollars (000,000)	Institutional Number (000)	Institutional Dollars (000,000)
1979-80	108.0	$90.8	21.7	$13.4	102.9	$83.5	26.5	$22.7
1980-81	106.3	86.6	22.8	13.7	98.7	86.2	32.5	30.7
1981-82	108.1	84.5	22.7	14.0	93.6	89.8	36.0	36.6
1982-83	106.9	91.8	22.9	13.5	105.4	92.4	45.6	50.8
1983-84	118.0	106.8	23.7	14.0	107.9	104.6	41.7	60.7
1984-85	116.2	116.4	23.9	14.3	105.0	109.7	42.3	66.2
1985-86	115.7	133.4	24.0	15.6	102.9	120.6	45.1	73.2
1986-87	102.8	121.8	21.7	14.7	99.1	128.9	47.2	85.7
1987-88	102.5	123.0	20.7	14.9	99.1	134.9	52.3	95.5
1988-89	112.5	144.2	20.1	15.5	99.3	139.7	53.8	106.2
Change:	+ 4.5	+53.4	-1.6	+2.1	-3.6	+56.2	+27.3	+83.5

Source: Illinois Board of Higher Education.

National College Freshmen Norms. The annual survey of American college freshmen conducted by the American Council on Education and the Higher Education Research Institute at UCLA provides another useful source for the study of trends in student financial aid. In a paper based on that data, Green (1988) reported that the proportion of freshmen reporting having received a Pell Grant declined from 31.5 percent in 1980 to 16.9 percent by 1986. Concurrently, Green reported a 40 percent increase in the proportion of college freshmen having received a campus-funded grant or scholarship. Unlike the Illinois experience, Green reported that nationally the proportion of freshmen reporting an institutional grant or scholarship increased by 64 percent in public universities, 69 percent in public four-year colleges, 23 percent in private universities, and 26 percent in private four-year colleges between 1980 and 1986.

These data highlight one of the major changes in student financial aid during the 1980s--the growth in the number of aid recipients and dollar volumes of institutionally funded scholarship and grant assistance. The preceding data do not tell us who benefited from the new institutional dollars. To answer this question we must go to another source: the National Postsecondary Student Aid Study.

Distribution of institutionally funded grants and scholarships. The National Postsecondary Student Aid Study was a federal attempt to capture detailed information on the financial aid system as it existed in 1986. States were offered the chance to augment the NPSAS sample to be able to conduct valid studies in their states. The following materials use data from both the New York and national undergraduate portions of NPSAS to describe the allocation of institutionally funded grants and scholarships across income levels.

Though the New York NPSAS report has not yet been published, the authors have shared some results of their study that describe the allocation of major types of federal, state, and institutional aid to full-time undergraduates by parental income level. These results are presented in Table 5.

The major financial aid programs available to New York undergraduates clearly serve different segments of the parental income distribution differently. Quantifying the populations served by each program shown in Table 5, 60 percent of those who received Pell Grants came from parental incomes of less than $20,000 per year compared to 24 percent of those who received institutional grants or scholarships. In contrast, just 9 percent of the Pell Grants were awarded to students whose parents earned more than $40,000 per year, compared to 48 percent of the institutionally awarded grants and scholarships.

The median parental incomes of aid recipients from the major programs shown tell the same story in a different way. The median parental income of Pell Grant recipients ($18,200) was about half of the median parental income of institutional grant recipients ($35,500). The median parental income of institutional grants and scholarship recipients came close to the median family incomes of all New York undergraduates ($40,100).

TABLE 5
Full-Time New York Undergraduates Who Were Awarded Aid by Parental Income and Aid Program
Fall, 1986

Parental Income	All New York Undergraduates	Receiving Financial Aid: Pell Grant	New York Grant	Stafford Loan	Inst. Grant	Any Aid
Less than $11,000	71,740	79%	71%	37%	20%	96%
$11,000-19,999	62,902	63	69	40	28	93
$20,000-29,999	70,195	47	64	50	30	85
$30,000-39,999	78,422	22	50	43	22	76
$40,000-49,999	149,027	7	35	42	27	71
$50,000 or more	136,458	3	9	24	18	49
TOTAL	568,744	31	43	35	22	73
Median Parental Income	$40,100	$18,200	$26,200	$33,800	$35,500	$33,400

Source: New York NPSAS study, unpublished data.

The national NPSAS survey results have been reported in somewhat different format, but with similar findings. Stowe's (1989) analysis of undergraduate aid award patterns reported that high family income students were two and one half to four times more likely to receive an institutional grant or scholarship than students from low family incomes when only institutional aid was provided. But even when institutional aid was combined with federal and state aid, high family income students were still more likely to receive aid than were students from low family income backgrounds. This finding applied to both dependent and independent students, at both low cost and high costs institutions. These data are summarized in Table 6.

Institutionally funded grants and scholarships clearly go to students from considerably higher family income backgrounds than do dollars provided by governmental programs. The growth in institutional aid has not gone to offset the loss of purchasing power of federal student aid programs in the 1980s, as Green reported in 1988. Institutional aid has increased sharply during the period when federal student aid was decreasing in purchasing power. But instead of going to offset federal losses, institutional aid has gone largely to students who were not eligible for federal and state need-tested student aid programs.

These were students who did not demonstrate financial need under the major need assessment formulas used today (Pell Grant Formula and Congressional Methodology). Rather, although not financially needy they were attractive enough to institutions such that colleges should assign their institutional funds to them. This institutional practice appears to be aimed at influencing college choice--not access--among students who were almost certain to attend college anyway.

TABLE 6
Sources of Financial Aid for Dependent and Independent Undergraduates
By Institutional Cost and Family Income
1986

	Family Income Range	Undergrads Number (000)	Aided Undergrads		Financial Aid Source							
			%	N(000)	Federal Aid Only	Inst. Aid Only	Private Aid Only	Fed & State Only	Fed & Inst. Only	Fed, State, & Inst Only	Sum	Inst. Combined With Federal & State
Total		11,185	48.6	5,431	32.8	15.2	7.7	16.4	9.0	6.9	88.0	31.1
DEPENDENT STUDENTS		7,048	47.8	3,367	28.0	18.4	5.3	15.5	10.0	8.6	85.8	37.0
Low Cost:												
Low Family Income	LT $18,641	960	56.9	547	33.1	14.1	5.8	25.5	5.8	5.0	89.3	21.8
Medium Fam. Inc.	$18,641-$36,076	1,306	38.4	501	30.1	23.8	7.9	17.5	4.7	3.0	87.0	31.5
High Fam. Inc.	GT $36,076	1,678	21.3	357	24.9	37.4	12.7	5.5	4.0	1.3	85.8	42.7
High Cost:												
Low Family Income	LT $18,641	665	84.6	563	31.5	6.6	1.3	22.3	11.2	14.8	87.7	32.6
Medium Fam. Inc.	$18,641-$36,076	884	73.1	647	24.3	10.6	2.6	15.7	13.4	16.5	83.1	40.5
High Fam. Inc.	GT $36,076	1,553	48.4	752	25.0	24.7	4.9	6.1	15.7	6.9	83.3	47.3
INDEPENDENT STUDENTS		4,138	49.9	2,064	39.5	10.0	11.6	18.0	7.4	4.0	90.5	21.4
Low Cost:												
Low Family Income	LT $3,028	690	59.4	409	42.9	7.2	4.2	26.2	7.9	3.5	91.9	18.6
Medium Fam. Inc.	$5,028-$15,767	729	55.2	402	41.1	9.8	4.9	24.3	7.8	3.2	91.1	20.8
High Fam. Inc.	GT $15,767	1,738	28.4	494	28.4	18.2	34.2	4.3	3.7	1.1	89.9	23.0
High Cost:												
Low Family Income	LT $5,028	310	87.4	271	42.1	3.8	1.7	24.0	9.6	7.8	89.0	21.2
Medium Fam. Inc.	$5,028-$15,767	336	88.4	297	47.1	3.1	2.3	21.4	9.7	7.5	91.1	20.3
High Fam. Inc.	GT $15,767	325	57.4	186	41.5	14.2	11.4	8.5	8.1	4.2	87.9	26.5

Source: National Postsecondary Student Aid Study, Stowe, 1989.

III. The Enrollment Effects

Thus far in this paper we have described the shift in student financial aid away from students from low family income backgrounds and toward students from middle and high family incomes. To the extent that financial aid influences college enrollment behaviors, we should be able to identify enrollment changes that have occurred since passage of the Middle Income Student Assistance Act of 1978 when the shift in student aid began. In this section we will attempt to do so. This section is taken from a more extensive ACT study (to be published later) of higher educational participation by students from different family income levels.

College enrollment behaviors include access, choice, persistence, and degree attainment. Financial aid has a greater effect on the first two of these behaviors than on the last two. Moreover, and especially for this study, financial aid is known to influence the enrollment behaviors of lower income students more than it does higher income students. The full range of influences on enrollment behavior include long range investment objectives, short term consumption considerations, a number of college attendance costs, and the capacity of higher education to enroll the student. This mix of factors--including student financial aid--produces the higher education participation behavior documented in this section.

Higher Education Participation by Family Income Levels

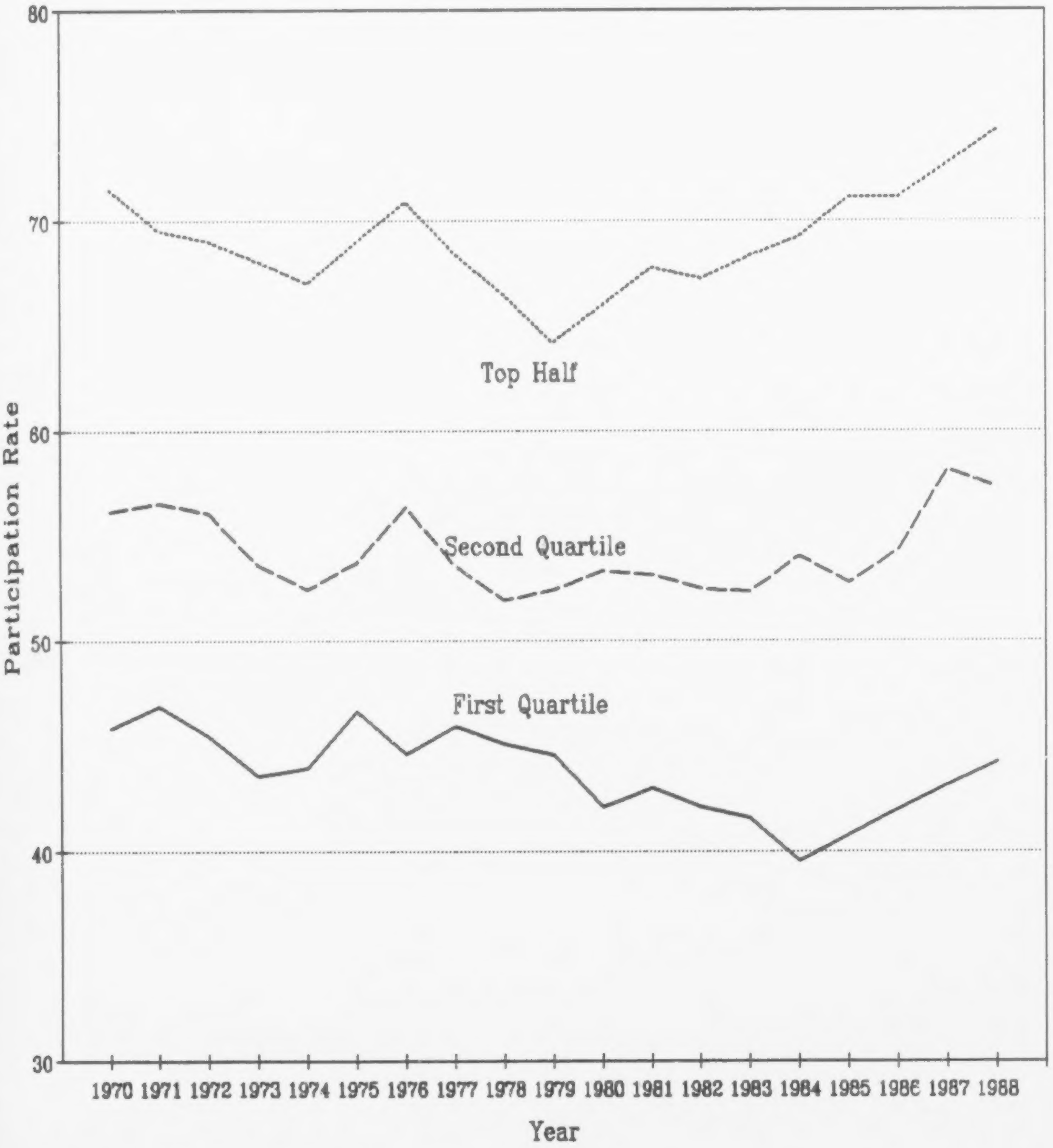
The Census Bureau's Current Population Survey has gathered and reported data on the college participation behavior of 18 to 24 year olds by family income since 1970. These data permit detailed examination of trends in college enrollment behavior. Here we will identify the major finding in low income participation in higher education during the 1980s, and further describe this condition for males, females, whites, blacks, and Hispanics.

For this study we have analyzed the college participation rates for unmarried high school graduates age 18 to 24 by family income intervals for each year from 1970 through 1988. The family income intervals used in the following charts are the bottom quartile, second quartile, and top half of the distribution of family incomes of families with unmarried 18 to 24 year olds living in them. In 1988, for example, a quarter of the unmarried 18 to 24 year olds lived in families with incomes up to $19,667. The second quartile included family incomes from $19,667 to $34,904. The top half was defined by the lower bound of $34,904. (See Appendix Table A-2 for income limit definitions for prior years.)

In Figure 14, college participation includes those currently enrolled in college, plus those who have been enrolled in college and either graduated or dropped out of college but were not enrolled at the time of the Current Population Survey. Family income is for 18 to 24 year olds who are unmarried. That is, in most cases these are individuals who are living with their parents and the family income reported is therefore mainly that of the parents.

The first major pattern in this data is that college participation rates have been strongly related to family income at least since 1970. Students from families whose incomes rank them in the bottom or first quartile of the family income distribution are or have been enrolled in college at lower rates

FIGURE 14
COLLEGE PARTICIPATION RATES FOR UNMARRIED HIGH SCHOOL GRADUATES AGE 18 TO 24 YEARS BY FAMILY INCOME QUARTILES
1970 TO 1988



Source: Current Population Survey, Series P-20.

than individuals from higher family income backgrounds. In 1988, the college participation rate for unmarried 18 to 24 year olds from the bottom quartile of the family income distribution was 44.3 percent, compared to 57.3 percent from the second quartile, and 74.3 percent from the top half. That is to say, an unmarried 18 to 24 year old high school graduate from the bottom quartile had only about 60 percent of the chance of a person from the top half of the family income distribution to have participated in college by 1988. An 18 to 24 year old high school graduate from the second quartile of the family income distribution had about 77 percent of the chance of a person from the top half of the distribution to have participated in higher education.

The second major pattern in these data is derived from Figure 14, and appears in Figures 15 and 16. Figure 15 plots the difference in the college participation rates of unmarried 18 to 24 year old high school graduates between the lowest quartile and those from the top half of the family income distribution. This suggests the participation gap that financial aid intended to overcome. In fact, many conditions produce the difference--or college participation gap--shown in Figure 15, including lack of preparation and commitment to achievement in higher education.

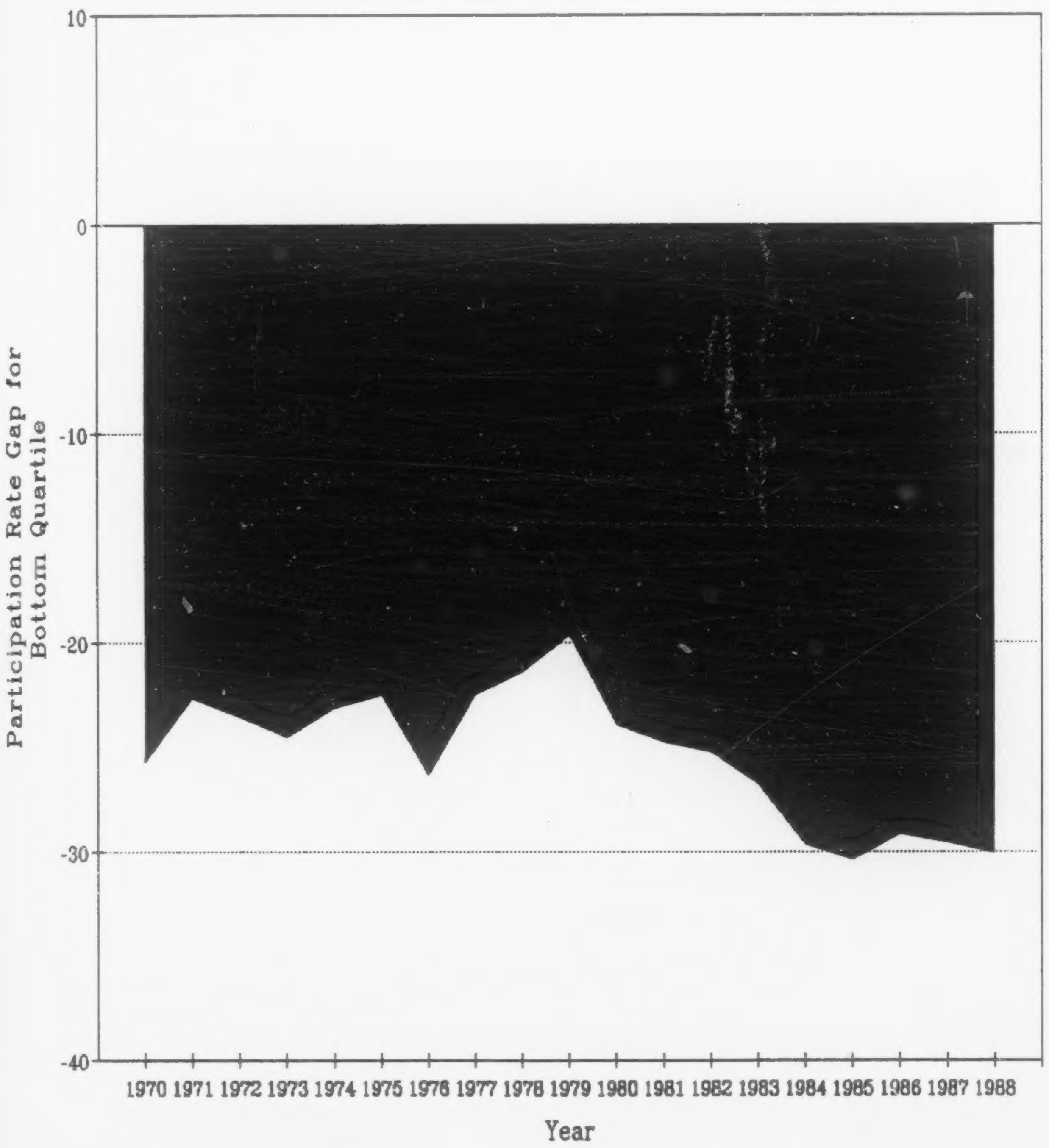
However, fluctuations in the difference between the two rates are of particular concern to public policy performance assessment. As shown in Figure 15, the college participation rate gap closed from 24.5 percent in 1973 to 19.6 percent by 1979. After 1979 the gap reopened to 30.0 percent by 1988. The progress made during the 1970s in closing the college participation rate gap was erased during the 1980s. Worse yet, the gap was wider after 1982 than it had ever been during the 1970s.

A similar, although less dramatic picture, emerges in Figure 16. For students from the second quartile of family incomes, the college participation rate gap held roughly steady during the 1970s, but has widened during the 1980s. This gap was wider during the mid and late 1980s than it had ever been during the 1970s.

The data in Figures 14 to 16 tell a compelling story of growing inequality of higher educational participation between persons from different ends of the family income spectrum. Powerful labor market signals call for ever greater levels of educational attainment in the American work force, particularly during the 1980s. Young persons from the top half of the family income distribution responded to these signals beginning in 1980 and continue to do so. Young persons from the bottom quartile began to respond in 1985 and continue to do so. But the five year delay put them farther behind the college participation rates of their affluent peers than they had ever been before. By 1988 the gap has not closed at all—it remains as wide as ever.

To the extent student financial aid was designed to address economic inequality of higher educational opportunity, Figures 15 and 16 condemn the performance of student financial aid programs during the 1980s. Whatever was gained during the 1970s was more than lost during the 1980s for persons from the lower half of the family income distribution generally, and the bottom quartile in particular. To the extent student financial aid has been refocused from poor to middle income and affluent students, it appears to have contributed to the growing inequality of higher educational participation between those from low family income backgrounds and those from middle income and affluent family income backgrounds.

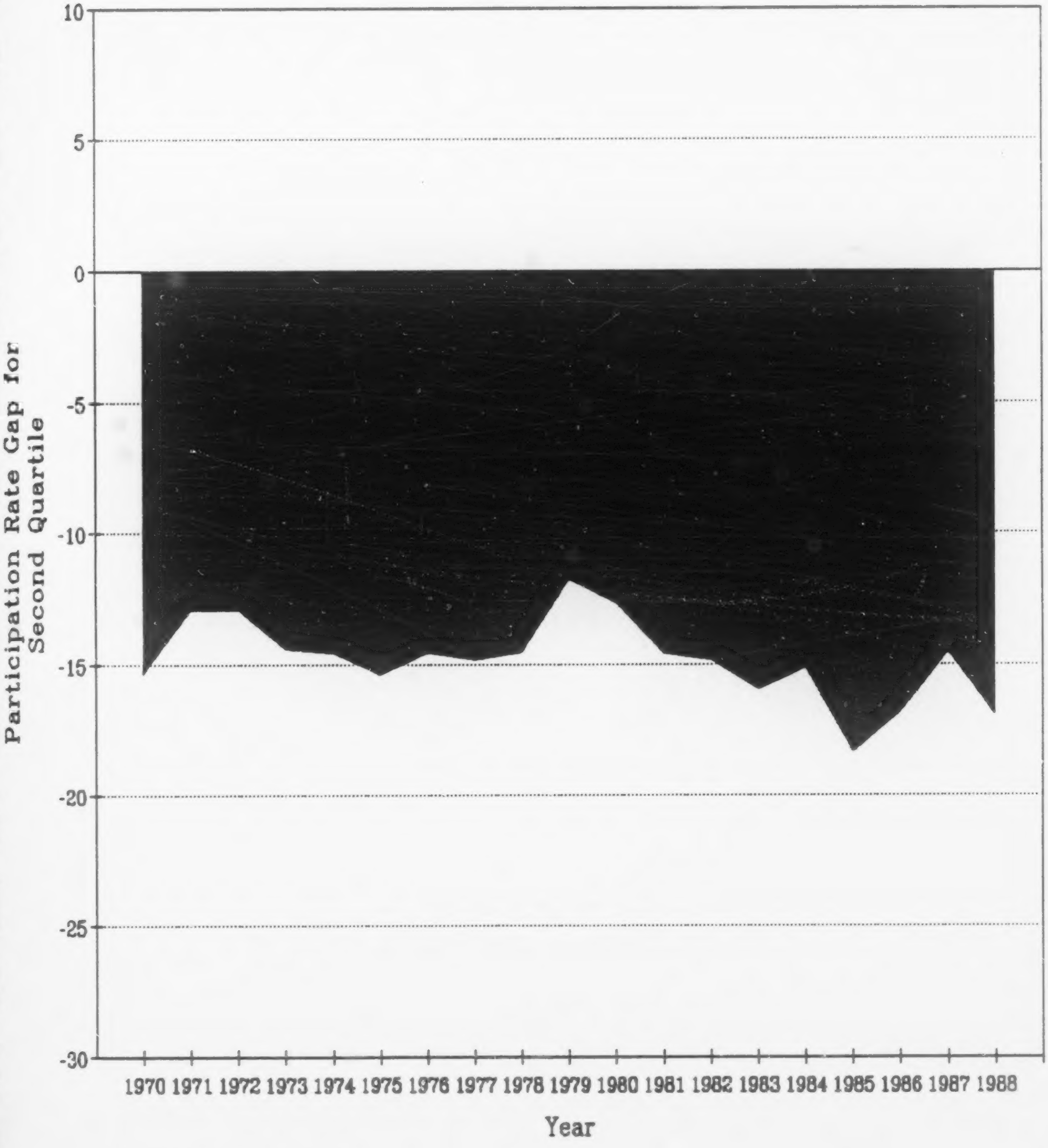
FIGURE 15
COLLEGE PARTICIPATION RATE GAP FOR UNMARRIED HIGH SCHOOL GRADUATES AGE 18 TO 24 YEARS FROM LOWEST FAMILY INCOME QUARTILE
1970 TO 1988



Source: Current Population Survey, Series P-20.

FIGURE 16

COLLEGE PARTICIPATION RATE GAP FOR UNMARRIED HIGH SCHOOL GRADUATES AGE 18 TO 24 YEARS FROM SECOND FAMILY INCOME QUARTILE 1970 TO 1988



Source: Current Population Survey, Series P-20.

Gender. Figure 17 shows the college participation rates for unmarried male high school graduates age 18 to 24 between 1970 and 1988. The pattern is similar to the pattern depicted in Figure 14: college participation rates vary directly with income. They are highest among those from highest income families, and lowest among those from lowest income families.

For the purpose of analysis here, we illustrate the difference between the college participation rates of males from the top half and bottom quartile of the family income distribution in Figure 18. This difference, or gap, appears to have been closing between 1970 and 1979, and to have widened since then.

A somewhat similar story is told by data on unmarried female high school graduates age 18 to 24 between 1970 and 1988. Figure 19 shows the college participation rates by family income levels, and again the rates vary directly with family income. College participation rates are highest for those from highest family income backgrounds, and lowest for those from lowest family income backgrounds.

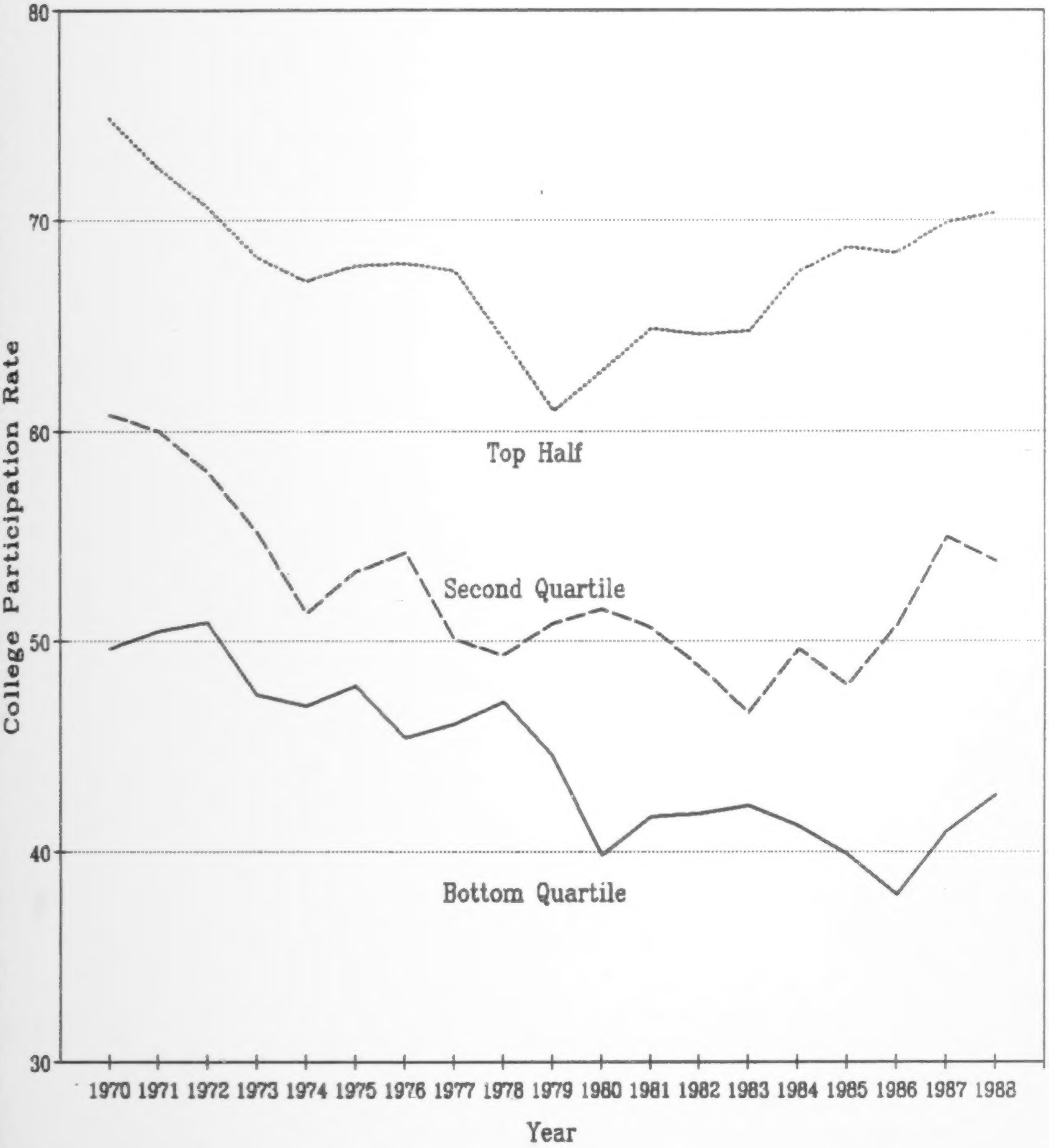
The difference in the rates for females from the top half and bottom quartile is shown in Figure 20. While this chart shows no progress in closing the college participation rate between 1970 and 1979, since 1979 the gap has clearly and substantially widened.

Race/ethnicity. Figures 21, 23, and 25 plot the college participation rates for unmarried white, black, and Hispanic high school graduates age 18 to 24. The patterns show some interesting variations, but the general finding still holds: college participation rates vary directly with family income for all three groups.

More important is the consistency of the finding that the gap between the rates for those from low and high family income backgrounds was less during the 1970s than during the 1980s. Figures 22, 24, and 26, show the gaps for whites, blacks, and Hispanics respectively. For whites, the difference between the college participation rates of top half and bottom quartile high school graduates increased by 4.3 percent between the 1970s and the 1980s. For blacks the difference increased by 4.9 percent. And for Hispanics, the difference increased by 5.4 percent.

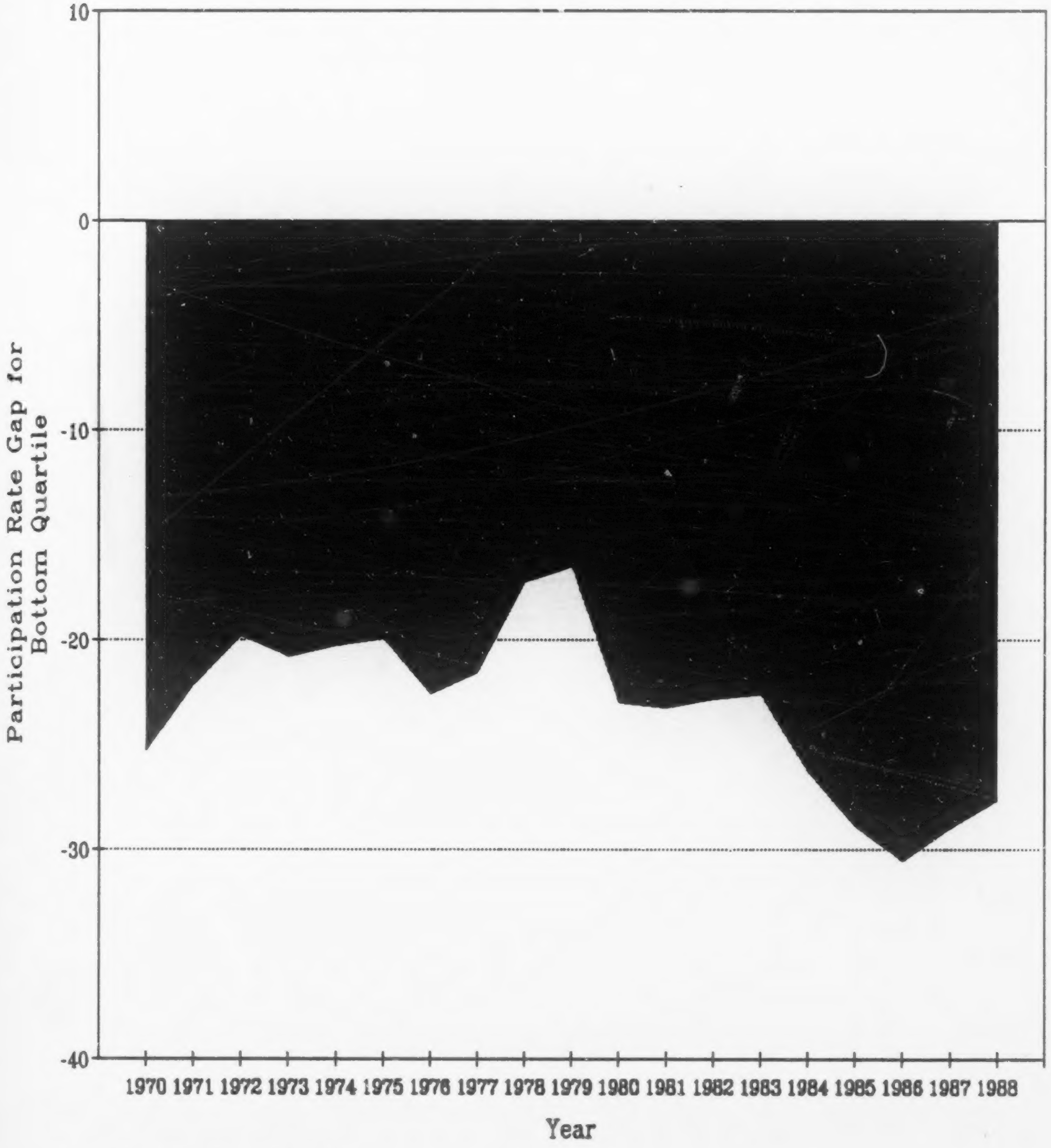
Neither gender nor race/ethnicity prevented a deterioration in college participation rates for bottom quartile high school graduates during the 1980s.

FIGURE 17
COLLEGE PARTICIPATION RATES FOR UNMARRIED MALE HIGH SCHOOL GRADUATES AGE 18 TO 24 YEARS BY FAMILY INCOME QUARTILES
1970 TO 1988



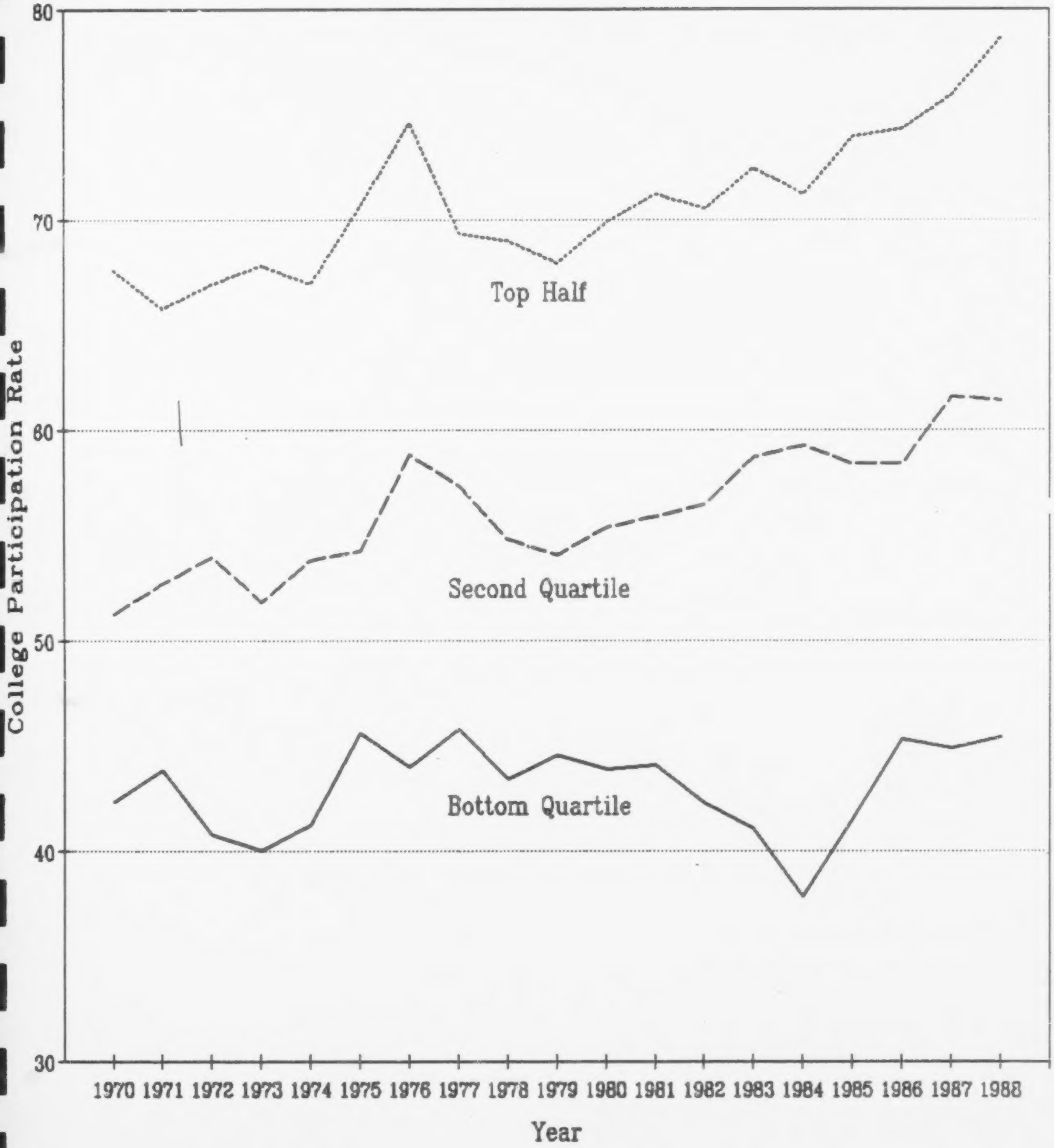
Source: Current Population Survey, Series P-20.

FIGURE 18
COLLEGE PARTICIPATION RATE GAP FOR UNMARRIED MALE HIGH SCHOOL GRADUATES AGE 18 TO 24 YEARS FROM LOWEST FAMILY INCOME QUARTILE, 1970 TO 1988



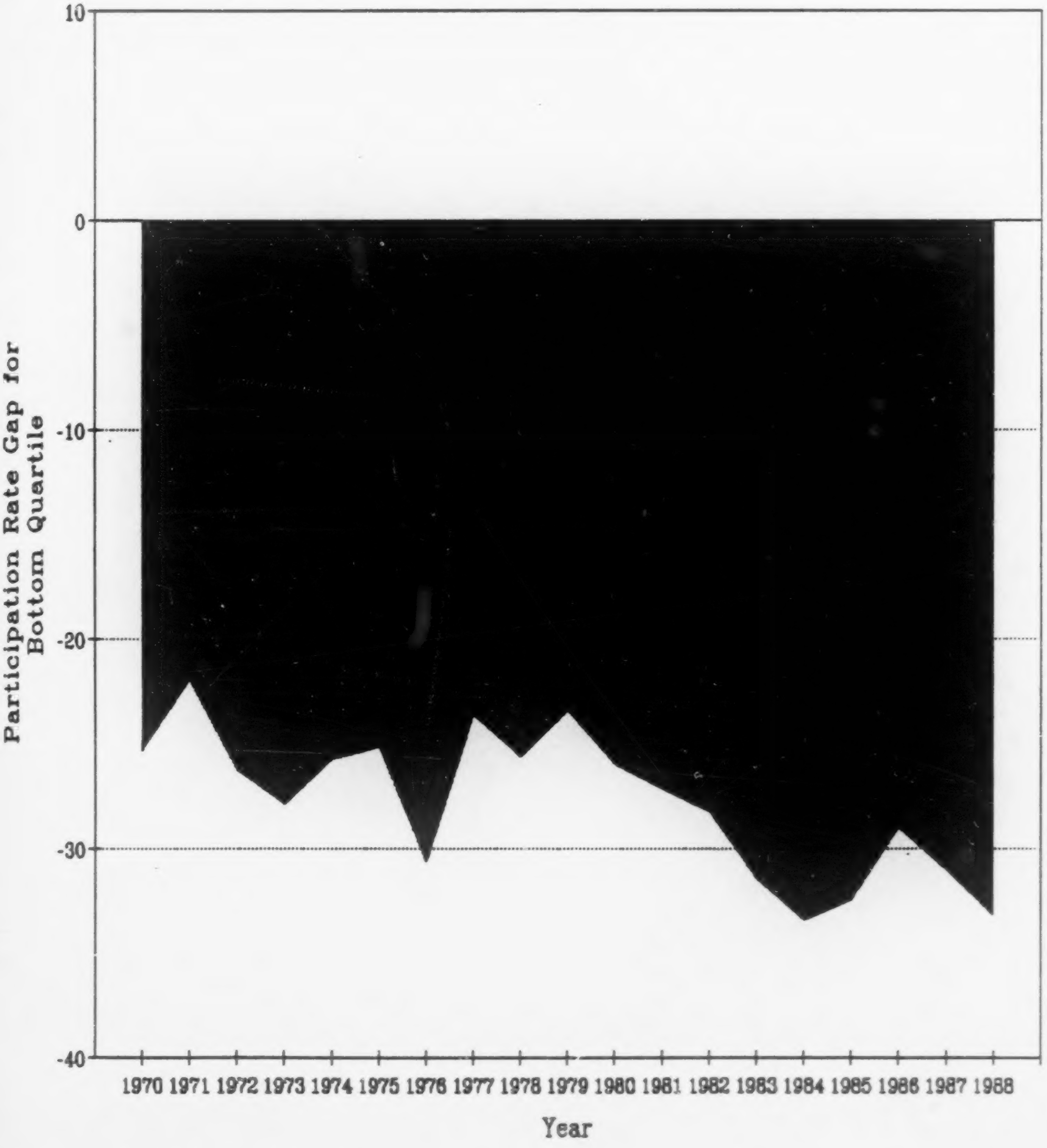
Source: Current Population Survey, Series P-20.

FIGURE 19
COLLEGE PARTICIPATION RATES FOR UNMARRIED FEMALE HIGH SCHOOL GRADUATES AGE 18 TO 24 YEARS BY FAMILY INCOME QUARTILES
1970 TO 1988



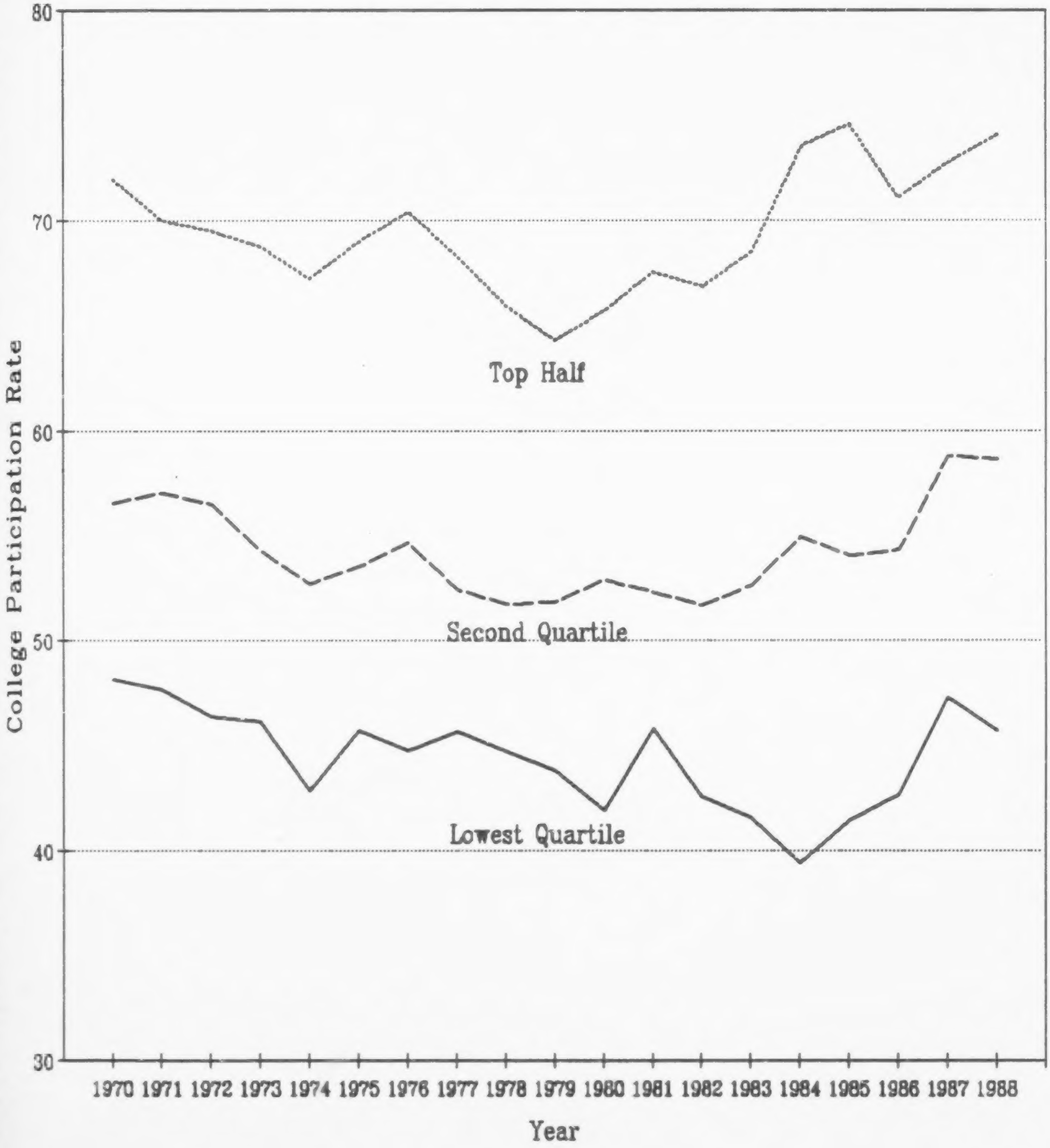
Source: Current Population Survey, Series P-20.

FIGURE 20
COLLEGE PARTICIPATION RATE GAP FOR UNMARRIED FEMALE HIGH SCHOOL GRADUATES AGE 18 TO 24 YEARS FROM LOWEST FAMILY INCOME QUARTILE, 1970 TO 1988



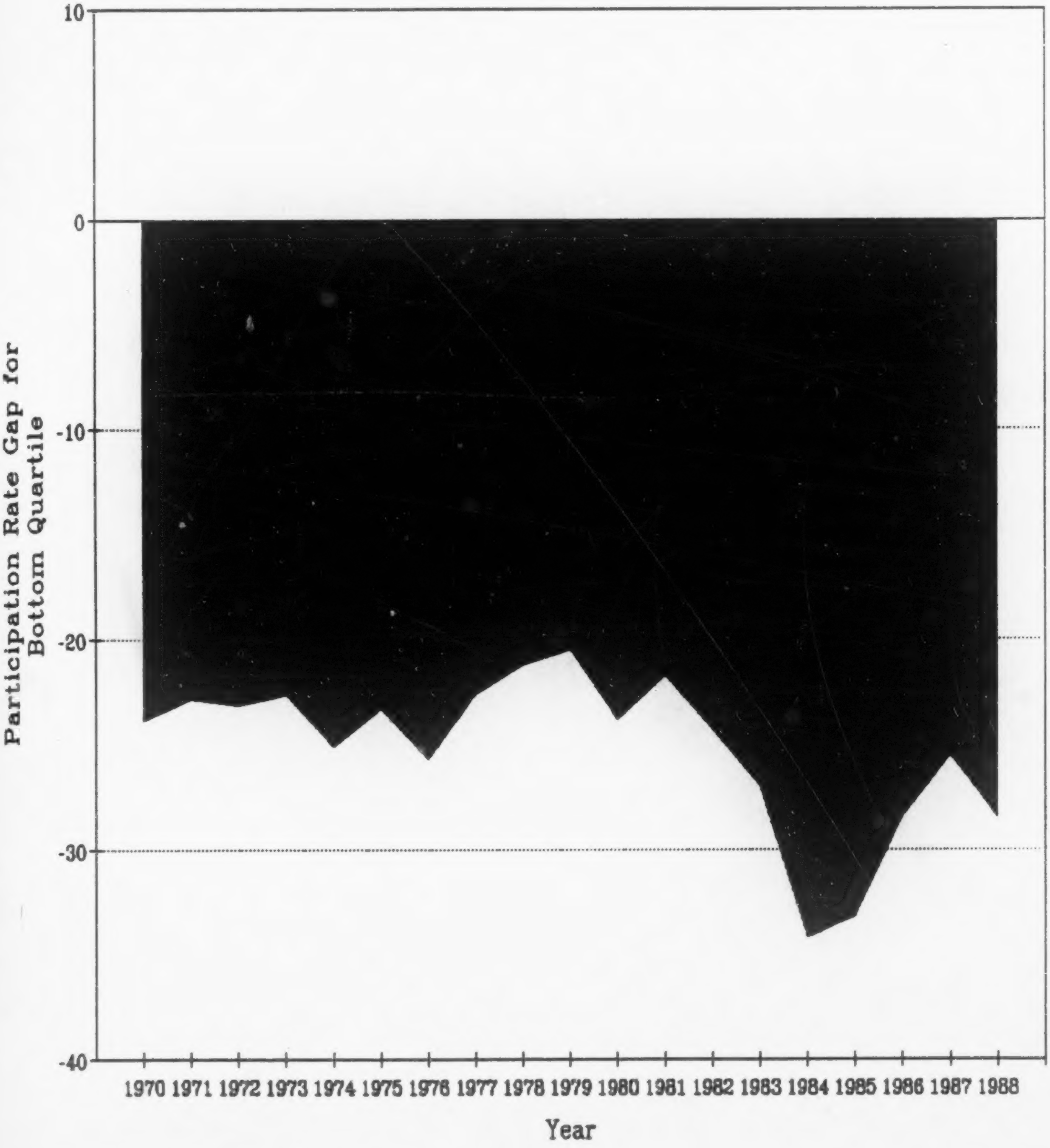
Source: Current Population Survey, Series P-20.

FIGURE 21
COLLEGE PARTICIPATION RATES FOR UNMARRIED WHITE HIGH SCHOOL GRADUATES AGE 18 TO 24 YEARS BY FAMILY INCOME QUARTILES
1970 TO 1988



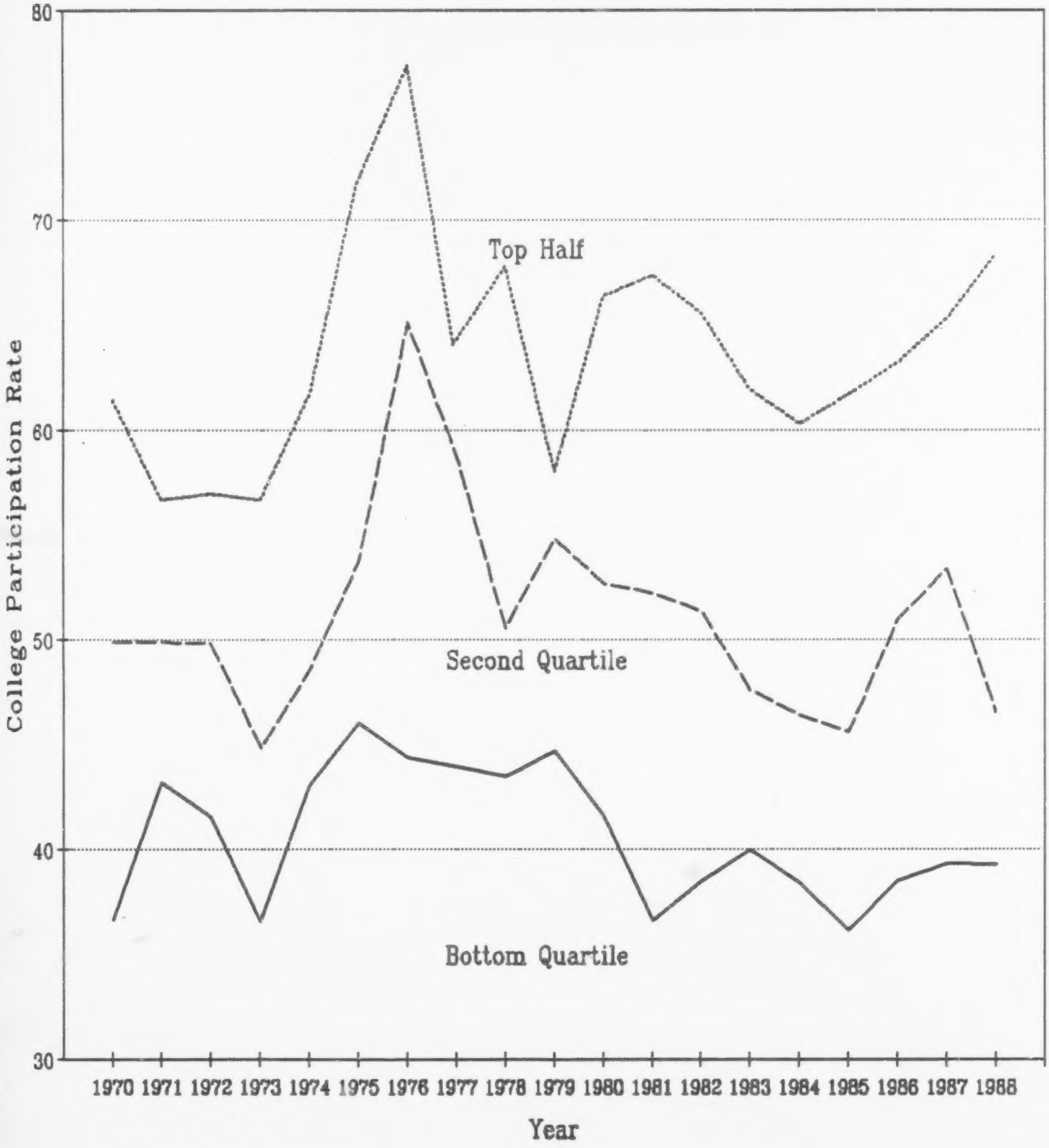
Source: Current Population Survey, Series P-20.

FIGURE 22
COLLEGE PARTICIPATION RATE GAP FOR UNMARRIED WHITE HIGH SCHOOL GRADUATES AGE 18 TO 24 YEARS FROM LOWEST FAMILY INCOME QUARTILE, 1970 TO 1988



Source: Current Population Survey, Series P-20.

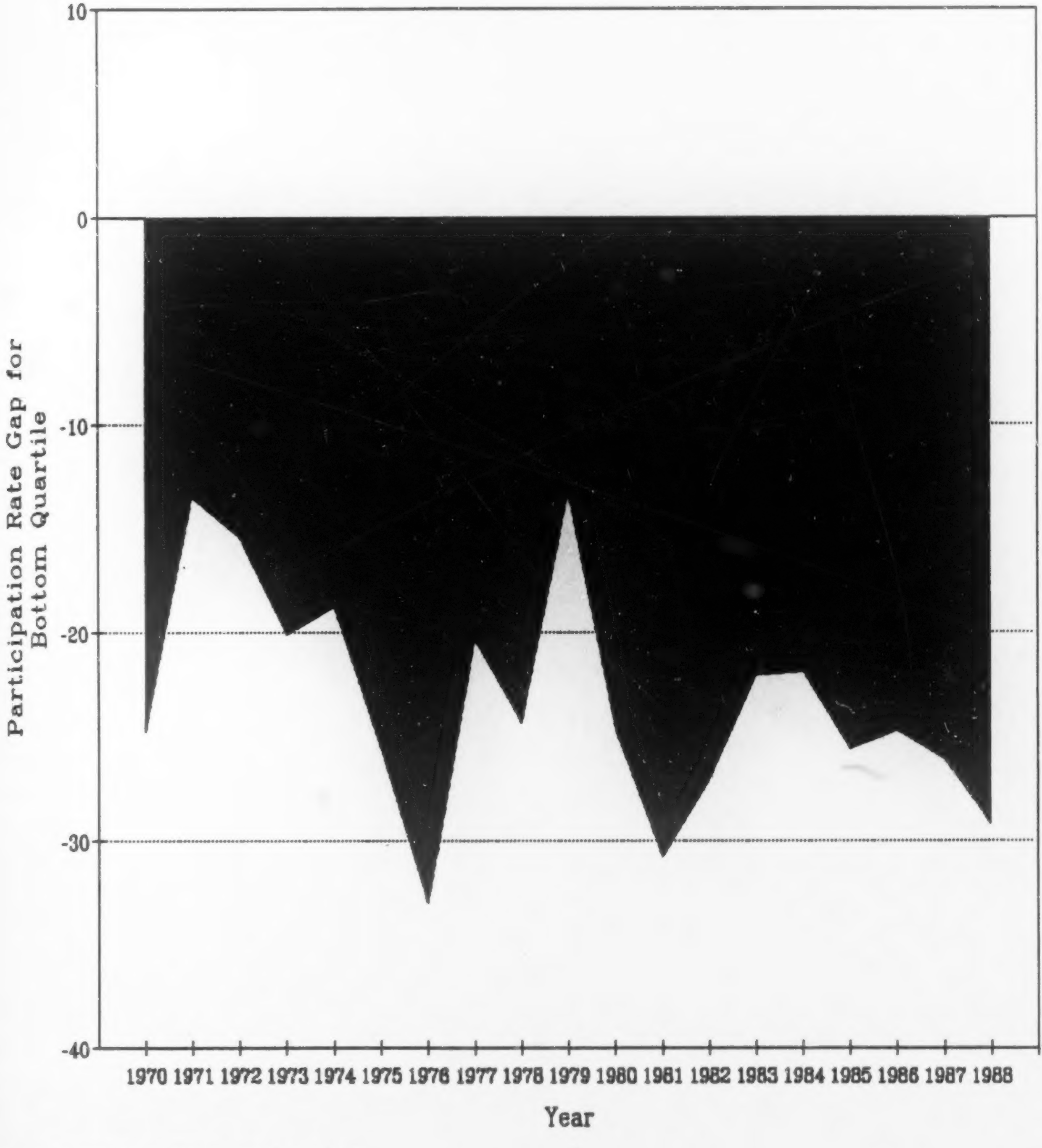
FIGURE 23
COLLEGE PARTICIPATION RATES FOR UNMARRIED BLACK HIGH SCHOOL GRADUATES AGE 18 TO 24 YEARS BY FAMILY INCOME QUARTILES
1970 TO 1988



Source: Current Population Survey, Series P-20.

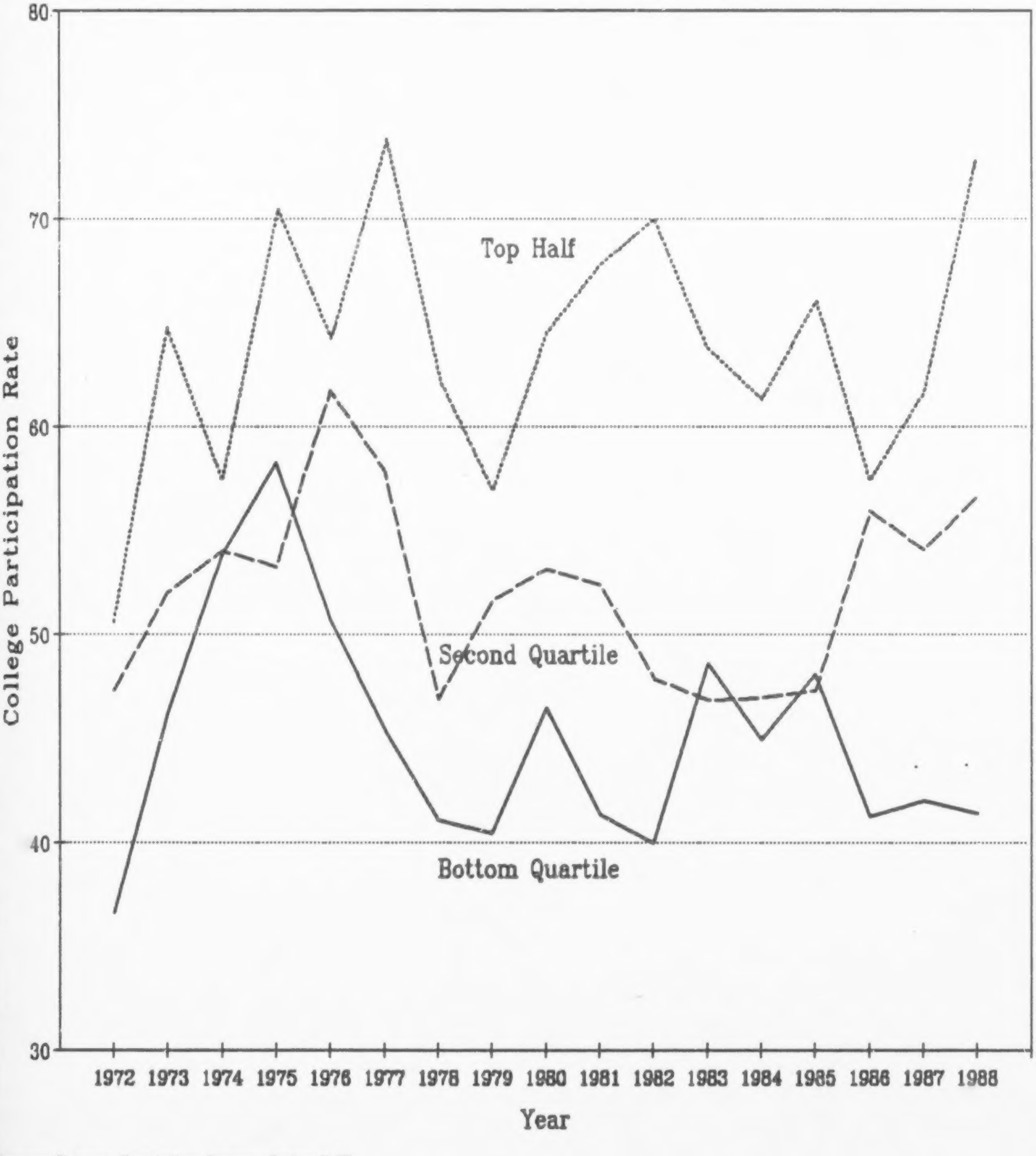
FIGURE 24

COLLEGE PARTICIPATION RATE GAP FOR UNMARRIED BLACK HIGH SCHOOL GRADUATES AGE 18 TO 24 YEARS FROM LOWEST FAMILY INCOME QUARTILE, 1970 TO 1988



Source: Current Population Survey, Series P-20.

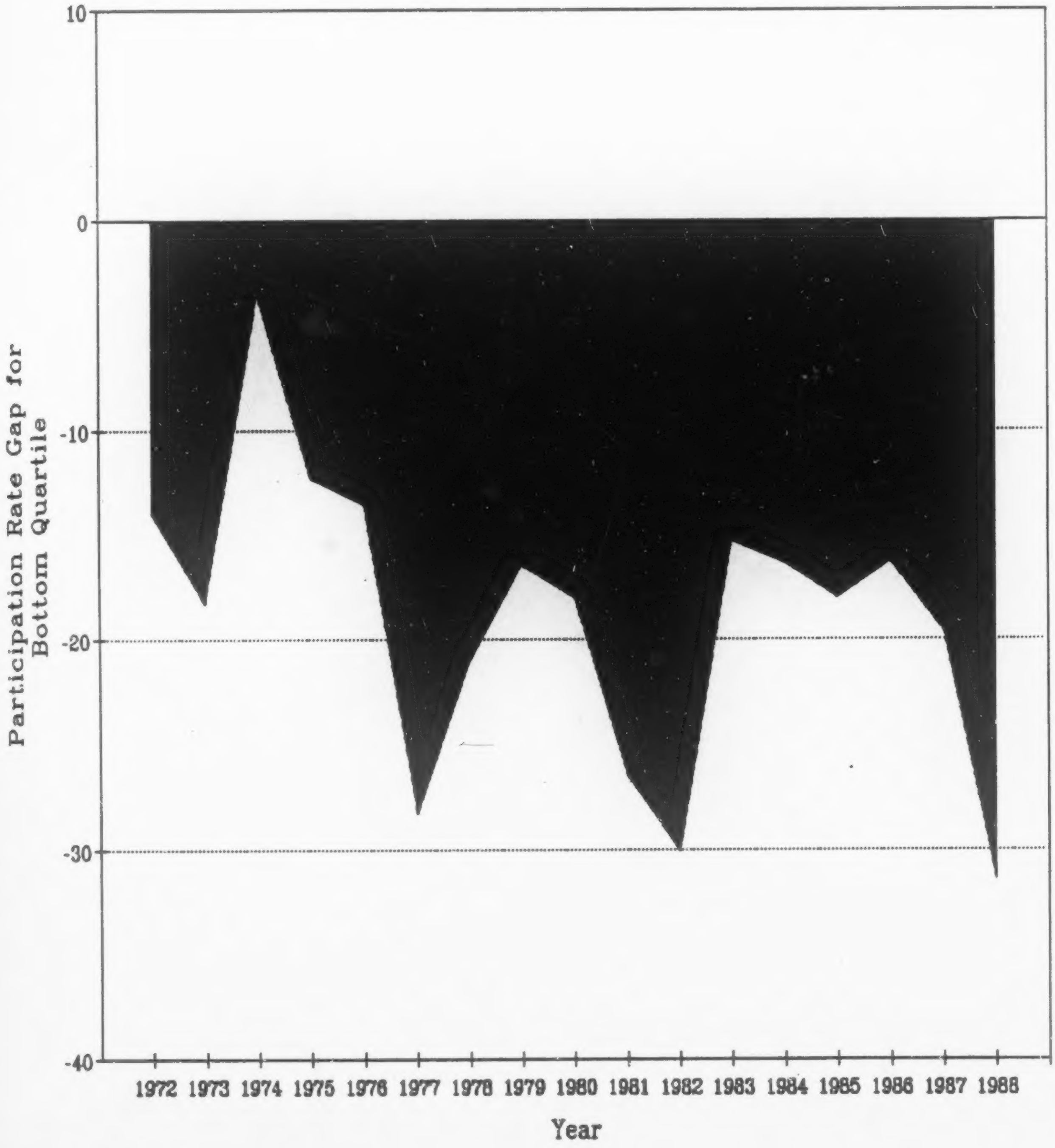
FIGURE 25
COLLEGE PARTICIPATION RATES FOR UNMARRIED HISPANIC HIGH SCHOOL GRADUATES AGE 18 TO 24 YEARS BY FAMILY INCOME QUARTILES
1972 TO 1988



Source: Current Population Survey, Series P-20.

FIGURE 26

COLLEGE PARTICIPATION RATE GAP FOR UNMARRIED HISPANIC HIGH SCHOOL GRADUATES AGE 18 TO 24 YEARS FROM LOWEST FAMILY INCOME QUARTILE, 1972 TO 1988



Source: Current Population Survey, Series P-20.

IV. Influences on Financial Aid Policy

The changes in the design of federal, state, and institutional student financial aid programs since 1978 are the direct result of dynamic influences within the processes that create, recreate, and fund them. In this section we will explore the political and economic influences acting on the student financial aid system that have shifted the focus of student financial aid from low family income students to middle and affluent family income students.

Political Influences in Governmental Programs

Who votes. Federal and state higher educational programs are the result of political processes executed by representatives elected by voters. To begin to understand the outcomes of these political processes one must understand who votes (and who does not) and what the interests and priorities of the voting population are. Thereby, one may begin to understand the relative interests and priorities of the representatives that voters select and who create, recreate, and fund student financial aid programs.

The Current Population Survey offers a useful resource for examining the characteristics of voters in national elections. Table 7 summarizes voting rates by major demographic characteristics of the eligible adult population for the last seven presidential elections. Overall, the proportion of the adult population voting in these elections has declined substantially, from 69.3 percent in 1964 to 57.4 percent in 1988.

Of greater interest to this study are both the differences in voting rates among different demographic segments of the population (particularly by family income), and the changes in voting rates among these different population groups over time. In the 1988 election, for example, 43.4 percent of adults from the bottom quartile of the family income distribution voted, compared to 73.0 percent of those from the top quartile of the distribution. The magnitude of this difference must be quantified to be appreciated. There were 33.6 million potential voters in each family income quartile. From the lowest quartile--representing families with incomes from zero to $15,200--14.6 million votes were cast. From the second quartile, where family incomes ranges from $15,200 to $23,900, 18.4 million votes were cast. From the third quartile, with family incomes between $23,900 and $39,800, 21.8 million votes were cast. From the top quartile, where family incomes ranged upward from $39,800, 24.5 million votes were cast. That is to say, there were about 9.9 million more voters with incomes over $39,800 than there were with incomes of less than $15,200, despite equivalent representation in the potential voting population. There were 13.4 million more votes from the top half of the family income distribution than there were from the bottom half (where financial aid to attend college is more important).

Overall between 1964 and 1988, the proportion of the adults who voted dropped by 11.9 percent. However, this drop-off was greater among lower income potential voters than it was among higher income potential voters. In the bottom half of the family income distribution, voting rates dropped by 12.4 percent, compared to a drop-off of 9.7 percent among voters from the top half of the family income distribution. These changes reflect a shift in voter participation, and hence representation, toward adults representing higher family incomes and corresponding interests between 1964 and 1988.

TABLE 7
Voting Rates in Presidential Elections
1964 to 1988

	1964	1968	1972	1976	1980	1984	1988	Change: 64-88
TOTAL	69.3%	67.8%	63.0%	59.2%	59.2%	59.9%	57.4%	-11.9%
Family Income								
Bottom Quartile	55.7	55.9	50.4	48.0	46.8	46.5	43.4	-12.3
Second Quartile	67.2	65.2	58.3	55.8	56.9	57.4	54.7	-12.5
Third Quartile	74.5	74.1	69.9	64.6		66.5	65.0	-9.5
Top Quartile	82.9	80.7	77.8	73.3		74.3	73.0	-9.9
Education								
0 to 8 Years	59.0	54.5	47.4	44.1	42.6	42.9	36.7	-22.3
1 to 3 Years High School	65.4	61.3	52.0	47.2	45.6	44.4	41.3	-24.1
4 Years High School	76.1	72.5	65.4	59.4	58.9	58.7	54.7	-21.4
1 to 3 Years College	82.1	78.4	74.9	68.1	67.2	67.5	64.5	-17.6
4 or More Years College	87.5	84.1	83.6	79.8	79.9	79.1	77.6	-9.9
Race/Ethnicity								
White	70.7	69.1	64.5	60.9	60.9	61.4	59.1	-11.6
Black	58.5	57.6	52.1	48.7	50.5	55.8	51.5	-7.0
Hispanic	---	---	37.5	31.8	29.9	32.6	28.8	
Gender								
Male	71.9	69.8	64.1	59.6	59.1	59.0	56.4	-15.5
Female	67.0	66.0	62.0	58.8	59.4	60.8	58.3	-8.7
Age								
18 to 20	39.2	33.6	48.3	38.0	35.7	36.7	33.2	-6.0
21 to 24	51.3	51.1	50.7	45.6	43.1	43.5	38.3	-13.0
25 to 44	69.0	66.6	62.7	58.7	58.7	58.4	54.0	-15.0
45 to 64	75.9	74.9	70.8	68.7	69.3	69.8	67.9	-8.0
65 and over	66.3	65.8	63.5	62.2	65.1	67.7	68.8	+2.5

Source: Current Population Reports, Series P-20.

The squeeze on voter incomes. While adults from middle and affluent family incomes vote at higher rates than do adults from low income backgrounds, these voters have made economic choices about their lives that affect their perceived need for financial aid to help pay the college attendance costs of their children. In this section we will show how Americans have made economic choices regarding savings and indebtedness that have left them less well prepared to finance the college educations of their children during the last decade than in prior decades.

The National Income and Product Accounts (NIPA) provide one useful way to analyze the economic condition of Americans. Data spanning more than five decades permit one to examine the the proportions of income Americans have saved, and the relationship of debt to their incomes. As savings decrease and debt mounts, Americans have created for themselves an increased dependency on financial aid to help pay college attendance costs.

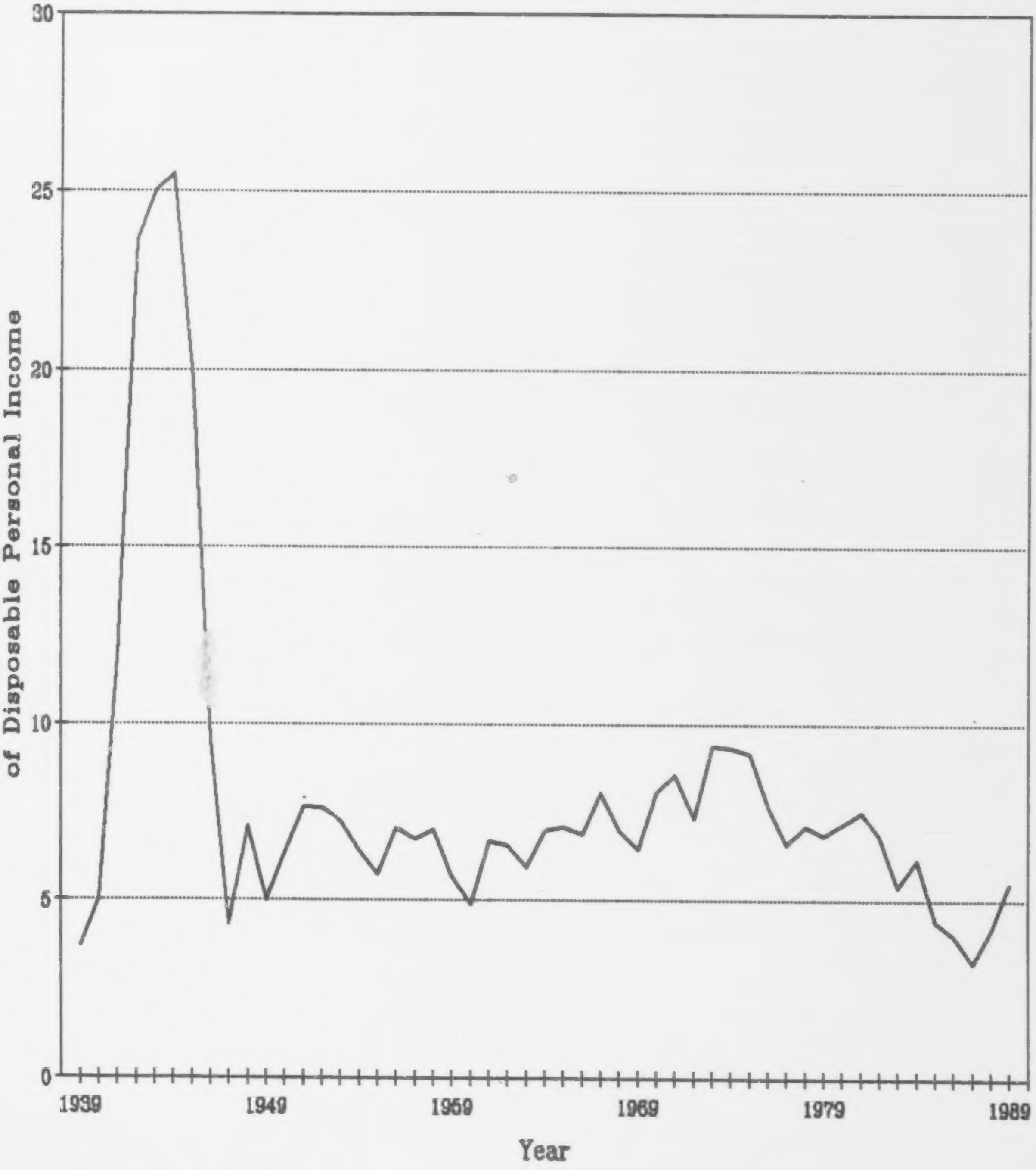
Figure 27 shows the proportion of Americans' disposable incomes devoted to savings for the last fifty years. During World War II, Americans committed about 25 percent of their disposable incomes to savings. After World War II and through the late 1960s, this share dropped into a range from 5 to 7 percent, then increased to about 9 percent during the mid 1970s. After 1975, however, the national savings rate entered a gradual decline that became a rapid decline after 1981. By 1987 the savings rate had declined to 3.25 percent—the lowest savings rate at any time during the last fifty years. By 1989 the savings rate had recovered partially to about 5 percent, a rate still below the national experience of the last five decades.

Figure 28 shows the ratio of consumer installment debt to disposable personal income for Americans between 1939 and 1989. Consumer installment debt goes to cover the purchase of such items as automobiles, appliances, etc. The trend is clear: consumer installment debt has grown much faster than income, from about 2 percent of disposable income at the end of World War II to about 19 percent for the last three years. In 1989 this ratio is higher than its ever been during the last fifty years. The installment payments on this debt have greatly eroded the remaining disposable income of Americans.

Finally, Figure 29 shows the ratio of mortgage debt to disposable personal income for the last two decades. Since 1970 mortgage debt has increased from about 66 percent of disposable personal income to about 94 percent, and by 1989 stood at a record high. Again, the payments on mortgage debt have reduced disposable personal income.

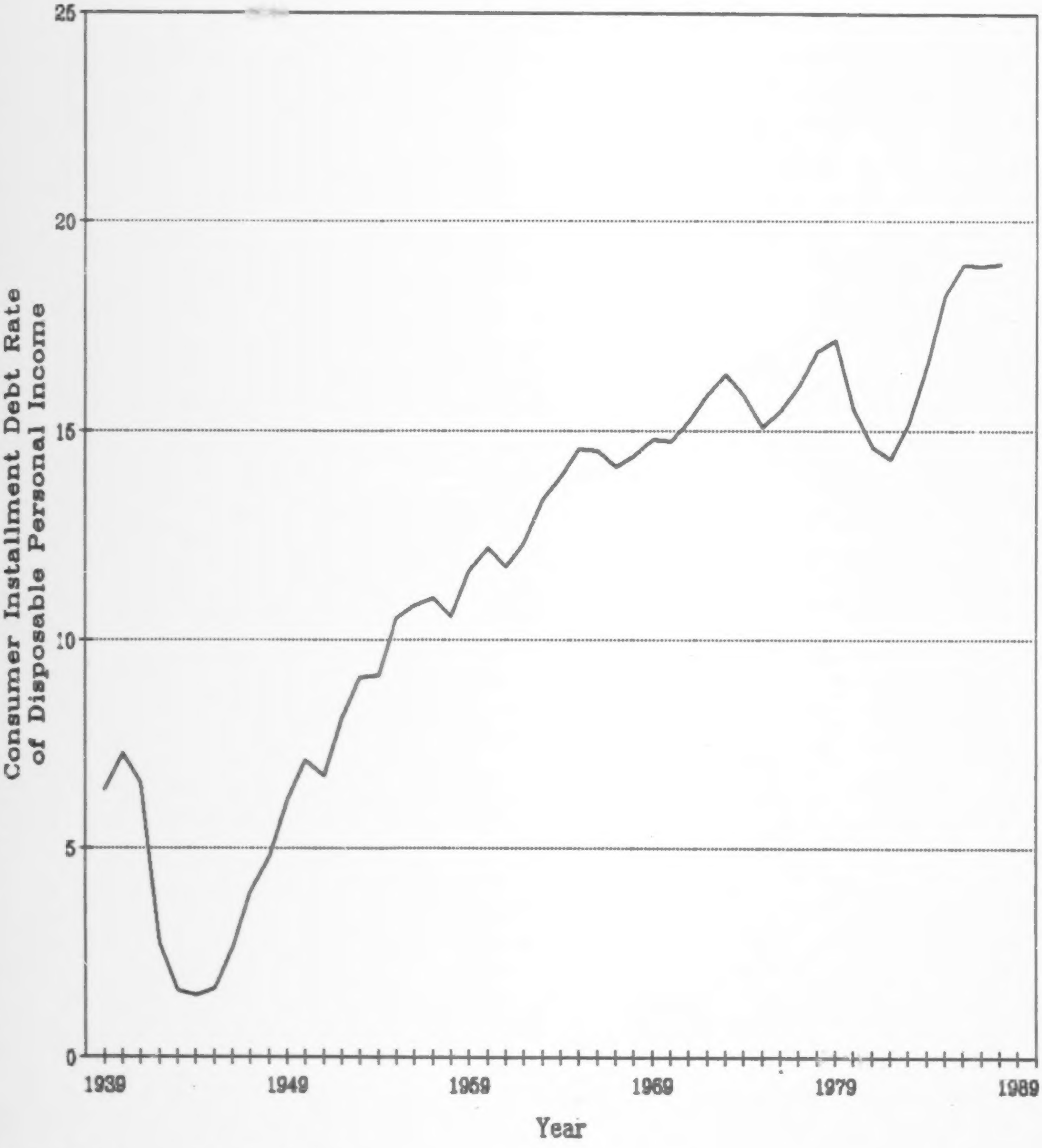
These three charts provide a plausible explanation for why Americans generally have greater need for financial aid programs than at any time in the past to help finance the college educations of their children. The savings rate is near an all-time low, and consumer installment and mortgage debt are at record highs. For many decades Americans have been spending more than they earned. In the process they have depleted their savings and borrowed against future incomes. When their children reach college age, families find themselves poorly prepared to finance the college educations from their savings and current and future incomes. Given the increasing educational requirements of the labor market, families clearly want to send their children to college to equip them for valuable labor market roles. But life-style choices regarding savings and

FIGURE 27
THE FAMILY FINANCIAL SQUEEZE
FROM SAVINGS
1939 TO 1989



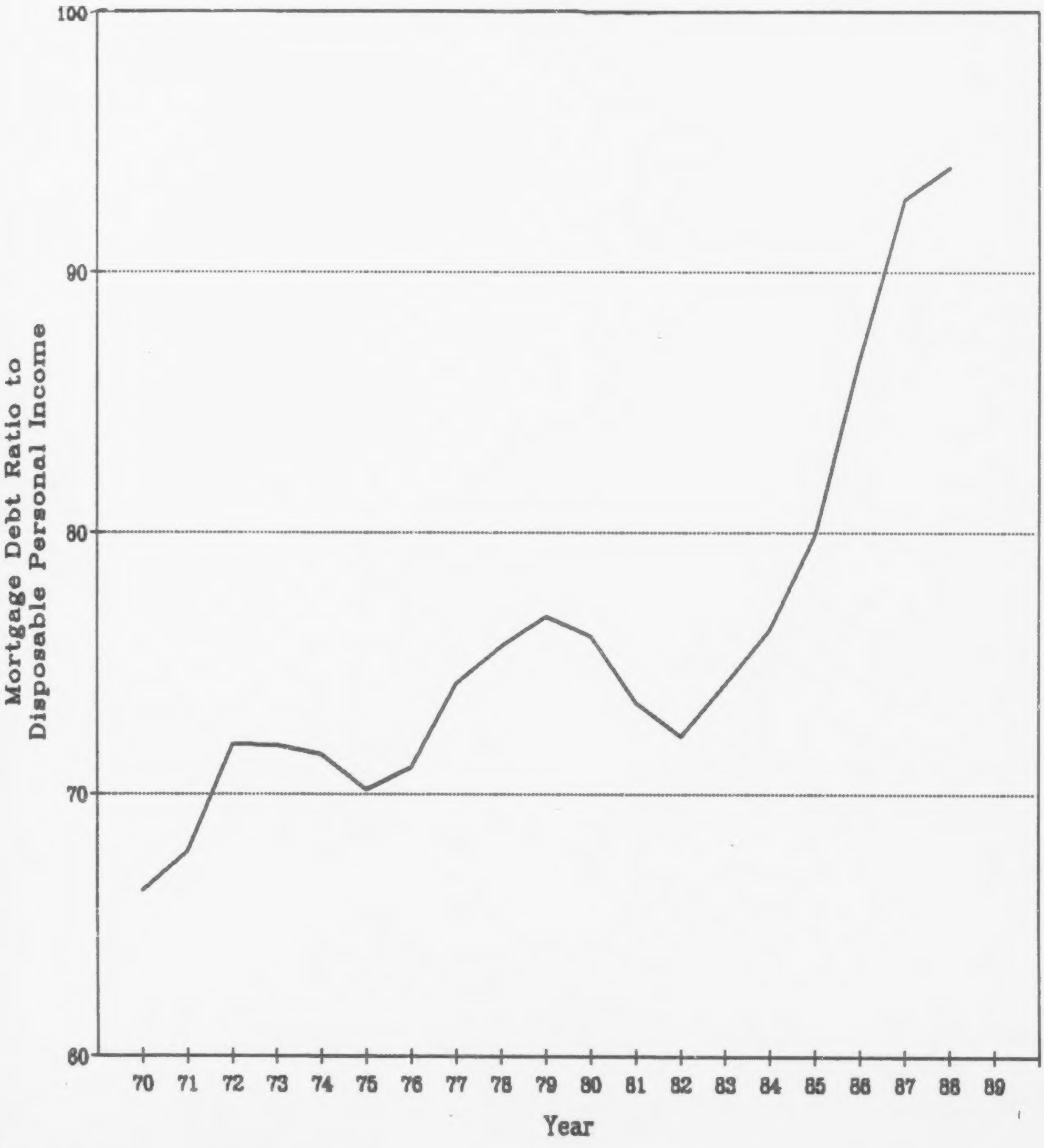
Source: National Income and Product Accounts.

FIGURE 28
THE FAMILY FINANCIAL SQUEEZE FROM CONSUMER INSTALLMENT DEBT
1939 TO 1989



Source: National Income and Product Accounts.

FIGURE 29
THE FAMILY FINANCIAL SQUEEZE FROM MORTAGE DEBT
1970 TO 1989



Source: National Income and Product Accounts.

borrowing made while the children were growing up in the family have left the parents poorly prepared financially to pay for their childrens' college educations from savings, current income, or future income through further debt. They feel they need help, they tell their elected representatives of their difficulties, and their representatives respond with changes to financial aid programs that appear to address their immediate needs.

The families that have not saved--the families that borrowed to finance consumer installment and mortgage debt--are the families with the highest voting rates in national congressional and presidential elections. They have chosen representatives whose positions reflect their concerns. These representatives in turn have made and remade governmental policies in ways that assure their re-election through responses to voter interests. The refocusing of student financial aid from low family income students to students from middle and high family income backgrounds can be viewed as a natural and inevitable result of this process.

Institutional Interests in Student Financial Aid

Institutions allocate their own grants and scholarships differently from the ways the federal and state governments allocate their funds as shown in Tables 5 and 6. While federal grant programs are focused on low income students, and state programs follow similar criteria, institutionally determined grants and scholarships appear to be skewed toward students from relatively high family income backgrounds. In the New York NPSAS study, for example, the median family income of Pell Grant recipients was $18,200, compared to $26,200 for New York state grant recipients, and $35,500 for recipients of institutional grants and scholarships.

To the extent institutions allocate their resources to meet organizational objectives, a budgetary interpretation of institutional priorities leads one to conclude that institutional financial aid objectives differ from the objectives of governmental student aid programs. Willie (1986) concluded her study of institutional aid awarding practices by noting that these objectives are multiple and not easily summarized. Student characteristics that appeared to be correlated with receipt and size of institutional aid awards were demonstrated financial need, academic merit, entering status, course load, gender, dependency status, and the receipt of a Pell Grant. The magnitude and direction of these relationships varied by institutional control and level.

Willie presented evidence that institutional financial aid was used as a tool to enhance institutional enrollment and revenues. At public four-year institutions, for example, the most important predictor for receiving aid for a given type of applicant was a low show-up rate among accepted applicants. Data limitations in her study did not permit extension of this analysis to institutions in other sectors.

Evidence from the National College Freshmen Norms indicates that institutional aid offers were a very important factor in college choice selection to about a fifth of college freshmen in 1989. The importance of this factor was greater in private institutions than in public institutions, and greater at four-year colleges than in universities or two-year colleges.

TABLE 8
Reasons Noted as Very Important in Selecting College of Enrollment
Fall, 1989

	All Inst	Universities Public	Universities Priv	4 Year Coll Public	4 Year Coll Priv	2 Year Colleges
Good academic reputation	52.8%	59.6%	77.3%	46.9%	61.1%	44.9%
Graduates get good jobs	43.7	45.0	57.4	39.4	47.6	41.6
Size of college	31.2	20.7	39.5	34.7	51.5	23.5
Graduates go to top grad schools	23.9	25.8	42.1	18.7	28.9	20.8
Offered financial assistance	22.8	15.9	29.9	23.8	35.5	18.7
Good social reputation	22.4	31.2	26.5	18.9	24.6	18.4
Low tuition	21.9	23.9	3.1	32.0	7.2	24.4
Offers special programs	20.3	17.8	20.5	19.3	23.4	20.5
Wanted to live near home	19.0	13.4	7.6	22.0	14.7	24.4

Source: The American Freshmen: National Norms for Fall, 1989.

The institutional purposes for financial aid generated from own revenue sources appear to be diverse and not always readily identifiable. Despite this ambiguity, one may easily conclude that institutional grants and scholarships have grown rapidly during the 1980s, and that these funds have not been used to offset the loss of purchasing power of federal grants directed toward low income populations.

V. Discussion

If we use the 1965 Higher Education Act and 1972 Education Amendments as reference points, we must conclude that the changes in student financial aid made since 1978 have redefined public policy toward financially needy students. The pervasiveness of the changes in federal, state, and institutional student aid programs and their consistency of direction over the last dozen years lead to the conclusion that the focus of student financial aid has shifted from the poorest students to students from more middle income and affluent family backgrounds. This refocusing of student financial aid from poor to middle income students is a reflection of political, social, and economic forces interacting to produce change.

Ultimately, we are left with one question:

> **Are we satisfied with the redirection and consequences of the federal, state, and institutional financial aid policies that have been pursued since 1978?**

In the remaining sections of this paper, I will try to identify some of these interactions as they influence the redesign of the student financial aid system.

Family Ability to Finance College Education

First, a juxtaposition of labor market demand/supply signals and escalating college costs have placed families in an increasingly difficult position regarding the choice and financing of higher education for their children. On the one hand, the labor market requires ever higher levels of educational attainment. Those who get that education are likely to succeed in the labor market, and those who do not are likely to experience a steadily eroding standard of living without prospect for improvement. Parents everywhere recognize the need for greater education for their children than they achieved themselves, and earnestly desire that their children have a solid chance at it for their futures. The labor market signals for ever higher levels of educational attainment have been especially strong in the 1980s.

Along with the rising labor market requirements for ever higher levels of educational attainment, college attendance costs have increased faster during the 1980s. In a real sense, over time families will feel that higher education is costing them more than it used to. They are correct in their perceptions if several fundamentals are ignored: 1) the comparatively modest college cost increases from the 1970s, and 2) the greater return on a college investment today than was the case a decade or two ago. In a comprehensive consideration of factors, however, these fundamentals cannot be ignored.

As labor market demands for collegiate education and college attendance costs have both risen faster than inflation, American family income growth has largely stagnated since the early 1970s. Some groups have experienced real gains in income, while others have experienced real losses. The dividing line between winners and losers appears to be the educational attainment of the head of the family.

For families whose incomes have not grown as fast as college attendance costs--hence greater than the cost of living--paying for college is more painful now than it was five or ten or twenty years ago. The labor market signals are clear that greater educational attainment is required to experience a higher and increasing standard of living. Parents understand this relationship, but find it increasingly difficult to pay for the education of their children without external financial assistance. Politicians attuned to their voting constituencies hear this complaint and have responded by altering eligibility for financial aid programs they authorized and now fund.

The Role of Special Interests

The enterprise we know as "financial aid" consists of many players, each with distinct programs and goals that only overlap at providing financial resources to students to enroll in higher education. The distinct interests of the different parties must be clearly identified before one can hope to understand how the whole system "works."

A fundamental axiom of political budgetary analysis is: listen not to what politicians announce to be the goals of a program but look instead at who benefits from the program. While all in the financial aid enterprise profess service to students, in fact little else binds us to that common theme. In fact,

- politicians seek votes for re-election;
- lenders seek profits from making loans;
- colleges seek enrollments that maximize revenues and/or academic reputation;
- guarantors seek jobs;
- budget makers seek ways to stretch dollars; and
- students seek a way to finance college educations.

Only in the last item do we find a common ground for our commitment to financial aid for students.

While the above ought to be self-evident, in fact it helps explain the shift in financial aid policy from poor to middle income students since 1978. Middle income families vote at higher rates than do poor families, and thus politicians have responded to the constituency that elects them to office. Lenders, guarantors, secondary markets, and the associations that represent their interests are well financed and influential lobbyists before Congress, and their influence is magnified by the absence of equally well financed representatives of other programs such as the orginal constituency of the Pell Grant Program. Budget makers have been under extraordinary pressure during the 1980s to hold down program costs. The appeal of federally guaranteed student loans, where capital for student aid comes from private markets and is not directly represented in federal accounts, is inescapable. Colleges have entered the financial aid system aggressively during the 1980s, but not to offset the loss of purchasing power of aid for poor people but to compete with other colleges for middle income enrollments. Students from such families are, by and large, better prepared to undertake collegiate study; less costly to attract, teach, and retain; and more likely to enhance the academic reputation of the institution than are students from poor families.

This system of private interests overlapping only in the provision of financial aid to needy students is rational only in a short-term sense. It utterly fails the long-term public interest. Education--like any human capital investment, but unlike physical capital investments--requires an extraordinarily long gestation period. Two decades or more of intensive, expensive investment are required before benefits are returned to the investor. In the United States, investments with relatively quick returns have been undertaken by the capitalist economy. Investments requiring long-term investment commitments and deferred benefits--such as human capital--have been the province of government. However, especially during the 1980s, the investment horizon of government has been drastically shortened. As governmental investment horizons have been foreshortened and become more like those of business, long-term human capital investment benefits have been sacrificed.

Family Willingness to Pay for College

The federal budget deficit is a creation of the federal government: revenues were reduced while spending programs continued. It is important to note that this deficit is a matter of deliberate actions and collective choice. The inevitable consequence of this choice is a deficit that disables the federal government from meeting established program commitments and undertaking new ones. The deficit could also become far worse should the economy enter a recession phase when revenues contract and obligations expand.

The American family is in a similar situation. During the 1980s American families chose to increase their expenses faster than they increased their incomes, and financed the difference through increased borrowing. According to the Federal Reserve System, consumer installment debt as a proportion of disposable personal income averaged about 18 percent between 1970 and 1983. Since 1984 it has averaged closer to 21 percent and in 1987--the last reported year--was at an all-time high of 21.5 percent and rising.

As consumption by American families has increased faster than incomes, the abilities of families to save for college diminishes. It is important to note that this is a matter of choice--current consumption over saving for future college expenses. Furthermore, when the time to send children to college arives, families are less able to make the sacrifices required to meet expected family contribution requirements determined through need analysis because of their increased debt. They have less discretionary income to pay college expenses for their children.

It is fair to conclude that families' willingness to make sacrifices for the college education of their children has diminished during the 1980s. At the same time, these families have lobbied Congress and others successfully for financial assistance to compensate for their own unwillingness to sacrifice for the college educations of their children. Congress has responded.

The above transference of family responsibilities for financing the college educations of their children to government is reflected in financial aid in other ways as well. By far the most significant example is the growth in independent students applying for financial aid. Of course these applicants are not independent or they would not be applying for financial assistance to pay college attendance costs. Rather, the more accurate description is that they seek to transfer their dependence from their parents to taxpayers generally. In financial aid we have struggled with guidelines to help determine when it would be acceptable to transfer financial dependence from parents to the government. This struggle continues because it is founded on weak logic and, for the same reason, probably never will be resolved.

But the more interesting question for financial aid is why so many people have deferred their collegiate enrollment into their late 20s. This question will be studied at ACT through a unique data file consisting of merged ACT assessment and financial aid applicant records. One of the hypotheses to be examined is whether those who defer their collegiate studies do so for financial reasons. We do not yet have the answer to this question, but will report it when we do.

Ultimately, we are left with one question:

> **Are we satisfied with the direction and consequences of the federal, state, and institutional financial aid policies that have been pursued since 1978?**

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TABLE A-1
Changes in Pell Grant Eligibility at a Public Four-Year College for Sample Dependent and Independent Cases at Different Income Levels Between 1987-88 and 1988-89

Dependent Cases

1) Family size = 4, 1 in college

1986 Income	$0	$10K	$12K	$14K	$16K	$18K	$20K	$22K	$24K	$26K	$28K	$30K
87-88 Pell Grant	2100	2100	1950	1750	1550	13450	1150	950	650	350	0	0
88-89 Pell Grant	2190	2190	2050	1950	1750	1550	1350	1150	850	550	250	0
Change in Grant	+90	+90	+100	+200	+200	+200	+200	+200	+200	+200	+250	0

2) Family size = 4, 2 in college

1986 Income	$0	$8K	$12K	$16K	$20K	$24K	$28K	$32K	$36K	$40K
87-88 Pell Grant	2100	2100	1950	1750	1450	1050	650	0	0	0
88-89 Pell Grant	2190	2190	2150	1950	1750	1550	1250	850	450	0
Change in Grant	+90	+90	+200	+200	+300	+500	+600	+850	+450	0

Independent Cases

3) Family size = 1

1986 Income	$0	$4K	$6K	$7K	$8K	$9K
87-88 Pell Grant	2100	2100	1750	1050	450	0
88-89 Pell Grant	2190	2190	1950	1350	750	0
Change in Grant	+90	+90	+200	+300	+300	0

4) Family size = 2, married, no children, 1 in college

1986 Income	$0	$6K	$7K	$8K	$9K	$10K	$11K	$12K	$13K	$14K	$15K	$16K
87-88 Pell Grant	2100	2100	2050	1750	1550	1350	1150	950	650	450	250	0
88-89 Pell Grant	2190	2190	2150	1550	850	250	0	0	0	0	0	0
Change in Grant	+90	+90	+100	-200	-700	-1100	-1150	-950	-650	-450	-250	0

5) Family size = 3, married, one child, 1 in college

1986 Income	$0	$8K	$10K	$12K	$14K	$16K	$18K	$20K	$22K	$24K	$26K	$28K
87-88 Pell Grant	2100	2100	1650	1250	850	350	0	0	0	0	0	0
88-89 Pell Grant	2190	2190	2050	1850	1650	1450	1250	1050	750	550	250	0
Change in Grant	+90	+90	+400	+600	+800	+1100	+1250	+1050	+750	+550	+250	0

6) Not married, 1 child, other in college

1986 Income	$0	$8K	$10K	$12K	$14K	$16K	$18K	$20K	$22K	$24K	$26K	$28K
87-88 Pell Grant	2100	2100	1750	1350	950	550	0	0	0	0	0	0
88-89 Pell Grant	2200	2200	2150	1950	1750	1550	1350	1150	850	650	350	0
Change in Grant	+100	+100	+400	+600	+800	+1000	+1350	+1150	+850	+650	+350	0

TABLE A-2

Family Income Quartile Definitions For Unmarried 18 to 24 Year Old High School Graduates 1970-1988

	Bottom Quartile	Second Quartile	Third Quartile
1970	$7,157	$10,875	*
1971	7,356	11,461	*
1972	7,721	12,258	*
1973	8,531	13,209	*
1974	9,044	14,209	21,191
1975	9,553	14,952	22,151
1976	9,972	16,083	23,793
1977	10,614	17,411	*
1978	11,477	19,271	*
1979	12,679	21,270	*
1980	13,214	22,415	*
1981	13,921	23,820	*
1982	14,857	26,773	*
1983	15,086	27,265	*
1984	15,991	28,525	*
1985	16,967	30,978	46,755
1986	16,954	31,316	48,112
1987	17,451	32,397	51,332
1988	19,667	34,904	55,871

*Not possible to calculate

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High School Graduation and College Participation of Young Adults by Family Income Backgrounds 1970 to 1989

Thomas G. Mortenson
Zhijun Wu

September 1990

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HIGH SCHOOL GRADUATION AND COLLEGE PARTICIPATION OF YOUNG ADULTS BY FAMILY INCOME BACKGROUNDS
1970 TO 1989

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HIGH SCHOOL GRADUATION AND COLLEGE PARTICIPATION OF YOUNG ADULTS BY FAMILY INCOME BACKGROUNDS
1970 TO 1989

Summary of the Study

This study examines and compares educational progress and attainment among 18 to 24 year olds from different family income backgrounds. Patterns and trends in high school graduation, college participation, and baccalaureate degree attainment are examined for young adults by gender and race/ethnicity over the last two decades. College participation behaviors are further analyzed by the years of higher education completed, enrollment in public and private institutions, and full-time/part-time enrollment status--all by quartiles of family income based on data collected in the Current Population Survey.

Since 1965 the federal government has been committed in policy and through appropriations to improving educational opportunities for children and young adults from low family income backgrounds. Principally through Title I of the Elementary and Secondary Education Act of 1965, and Title IV of the Higher Education Act of 1965, Congress has appropriated billions of dollars annually in an attempt to improve and equalize educational opportunities for economically disadvantaged populations.

Twenty five years after the inauguration of major federal initiatives to address inequality of educational opportunity, this study finds very large differences in educational progress between students from low and high family income backgrounds. At every level of educational advancement from high school graduation through college matriculation and graduation, young adults from low family income backgrounds are far less likely than are young adults from high family income backgrounds to advance in the educational system.

The disparities in educational advancement between young adults from low and high family income backgrounds are very large, pervasive, persistent, and growing. They are very large because their cumulative effects mean that a student from a high family income background has eight to thirteen times greater chance of having a baccalaureate degree by age 24 than does a student from a low family income background. They are pervasive because these disparities affect males, females, whites, blacks, and Hispanics alike. They are persistent because they have endured for the last two decades when major federal programs were in place to remedy them. And they are growing because the disparity in chances for earning a baccalaureate degree by age 24 between young adults from low and high incomes is greater during the second half of the 1980s than it has been at any time during the last two decades.

In light of the national commitment to equalize educational opportunities by assisting students from low family income backgrounds, the results of this study are profoundly unsettling.

Marriage

The years between 18 and 24 are years of transition between adolescence and adulthood. Traditionally, they involve higher education, marriage, and the beginnings of careers and new families. But over the last twenty years, an increasing share of young adults have chosen to defer marriage. As a result the proportion of the young adult population that is married has declined steadily, from 44 percent in 1970 to 25 percent by 1989. Although the population of 18 to 24 year olds was similar in 1970 (20.6 million) to the population in 1989 (20.5 million), the number who were married dropped from 9.1 million to 5.1 million. The decline in the marriage rate among young adults affects males, females, whites, blacks, and Hispanics, although not all groups are equally likely to be married. Females are most likely to be married, and blacks least likely over the last twenty years.

We have focused on the unmarried population in this study because it is the parents' income--not the married young adults' income--that is the primary basis of federal educational programs designed to assist students from low family income backgrounds. For the purpose of this study, we divided the population of unmarried high school graduates into quartiles of family income. In 1989, the bottom quartile included families whose incomes ranged up to $20,000. The second quartile ranged from $20,000 to $35,400. The third quartile ranged from $35,400 to $58,100, and the top quartile ranged upward from $58,100. There were the same number of unmarried 18 to 24 year old high school graduates in each quartile-2,855,000 in 1989, with corresponding populations in prior years.

High School Graduation

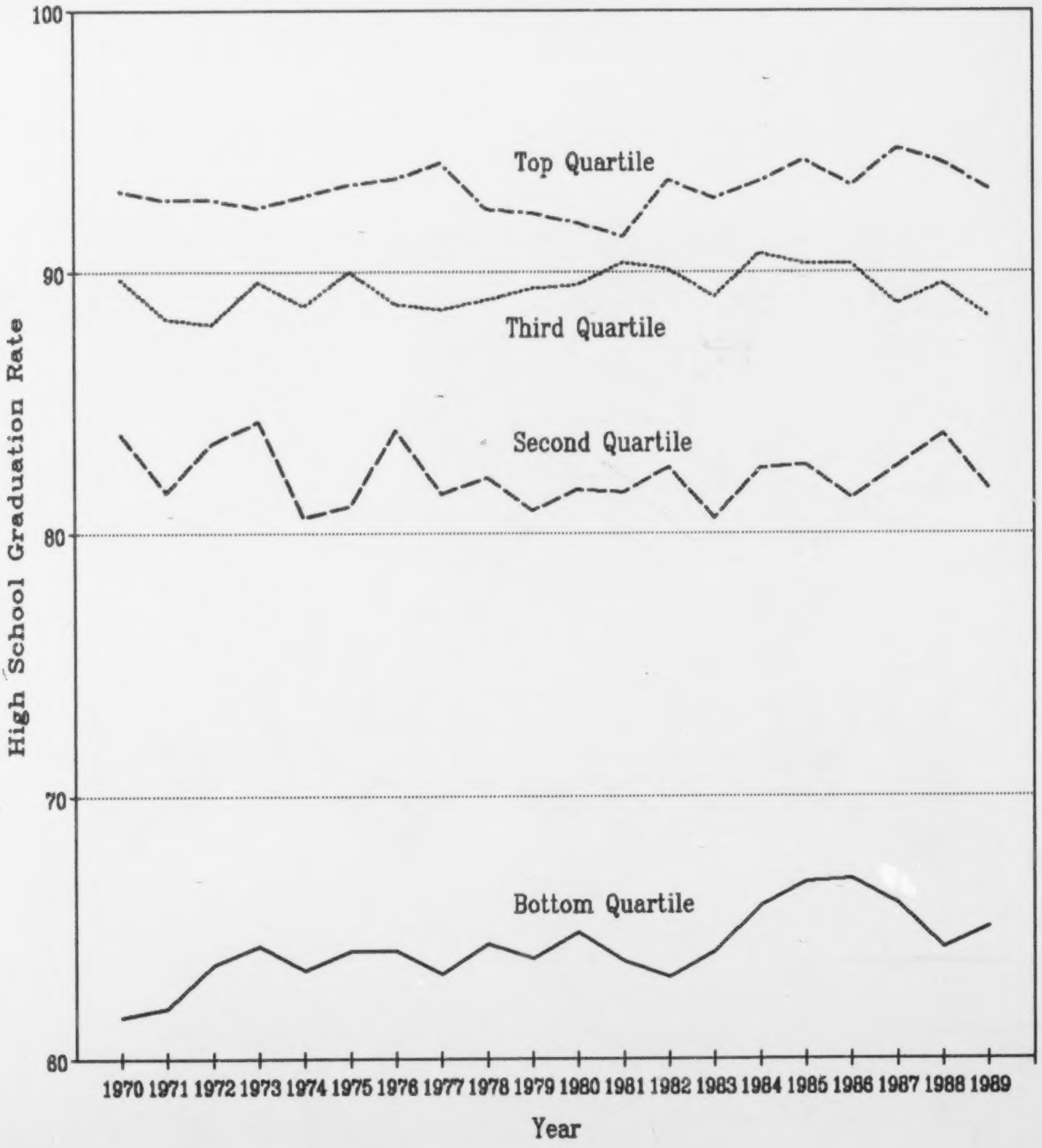
During the last twenty years the proportion of the unmarried 18 to 24 year old population that has graduated from high school has remained virtually flat at about 80 percent. (The proportion of the married population of 18 to 24 year olds that has graduated from high school has increased slightly from 75 to 78 percent.) Despite announced national goals to increase the high school graduation rate to 90 percent over the next ten years, the experience of the last two decades suggests it will take more than three centuries to achieve this goal.

The study finds large, pervasive, and persistent disparities in the high school graduation rates of students from different family income backgrounds. In 1989 an unmarried 18 to 24 year old from the top quartile of family income had a 93 percent chance to be a high school graduate, compared to an 88 percent chance for a person from the third quartile, an 82 percent chance from the second quartile, and a 65 percent chance from the bottom quartile. These percentages are similar to those for 1980 and 1970, as shown in Figure A, except in the bottom quartile where high school graduation rates have increased somewhat during the last two decades although this quartile became notably poorer.

The difference between the high school graduation rate for unmarried young adults from the top and bottom quartiles of family income has narrowed very slightly over the last twenty years, as shown in Figure B. Twenty years ago the gap was about 31 percent. For the last three years the gap has been about 29 percent, although around 1980 and again around 1986 the gap closed briefly to about 27 percent.

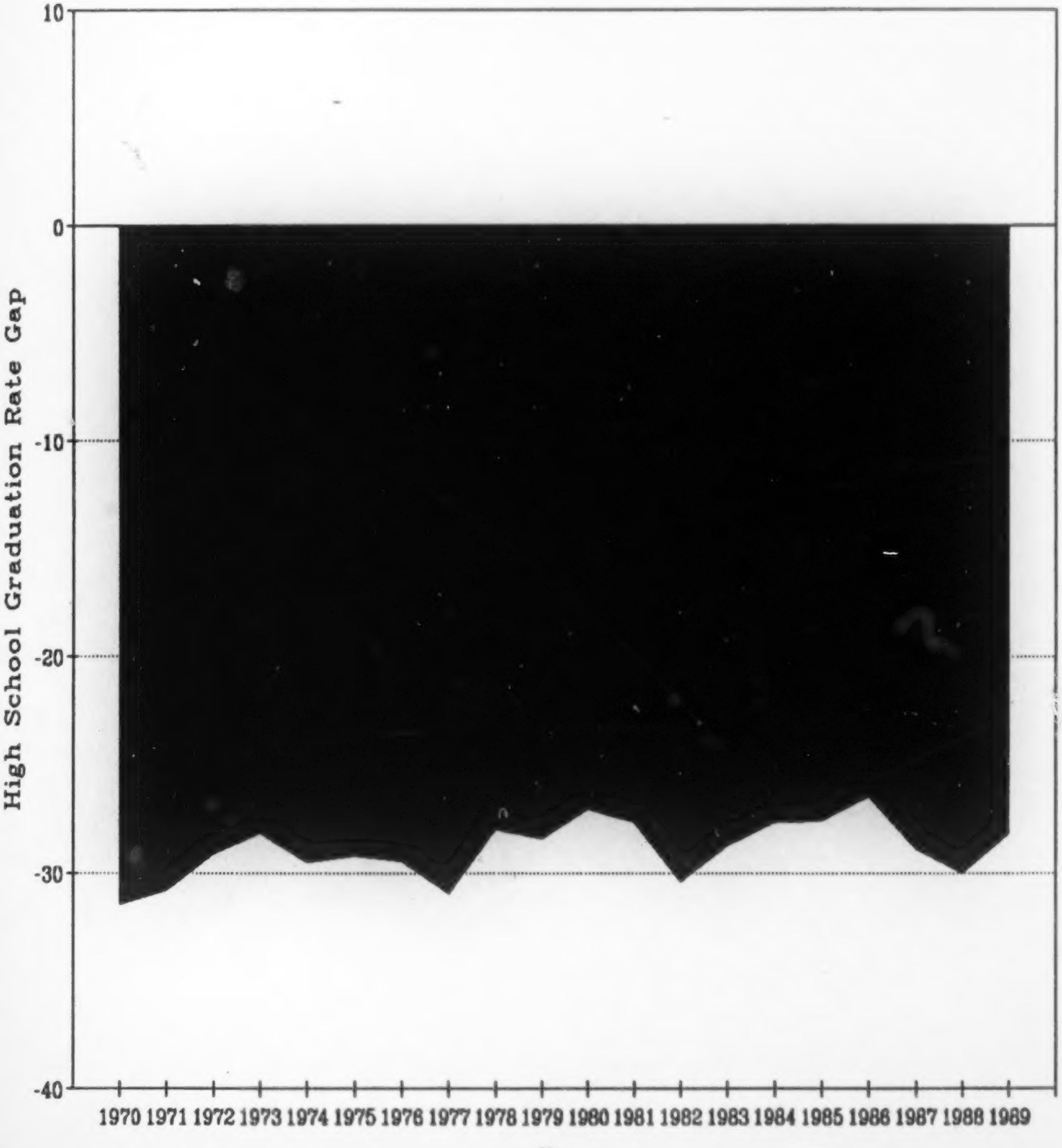
High school graduation rate patterns and trends varied by gender and race/ethnicity over the twenty year period of the study. Compared to the top quartile, low family income females and blacks made notable improvements in their high school graduation rates. No apparent progress was made by males, whites, or Hispanics during this period, however.

FIGURE A
HIGH SCHOOL GRADUATION RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED 18 TO 24 YEAR OLDS
1970 TO 1989



Source: Current Population Survey, Series P-20..

FIGURE B
HIGH SCHOOL GRADUATION RATE GAP FOR BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED 18 TO 24 YEAR OLDS
1970 TO 1989



Source: Current Population Survey, Series P-20.

College Participation

College participation. College participation rates for unmarried 18 to 24 year old high school graduates started at 61.3 percent in 1970, and ended at 61.7 percent in 1989. However, in between these rates dropped to a low of 56 percent in 1979 before recovering to nearly 63 percent by 1988.

When the college participation rates were analyzed by family income quartiles, this study found large, pervasive, persistent, and growing disparities. In 1989, an unmarried 18 to 24 year old high school graduate from the top quartile of the family income distribution had a 78 percent chance to be enrolled or to have been enrolled in college. From the third quartile the student had a 67 percent chance, from the second quartile the chance was 56 percent, and from the bottom quartile the young adult had a 45 percent chance. These rates are shown in Figure C for the last twenty years. The decline in college participation rates during the 1970s affected each quartile level of family income as the labor market for college graduates weakened. But during the 1980s the market strengthened and college participation rates responded accordingly, although the response came sooner for young adults from higher family income backgrounds than it did from lower family incomes.

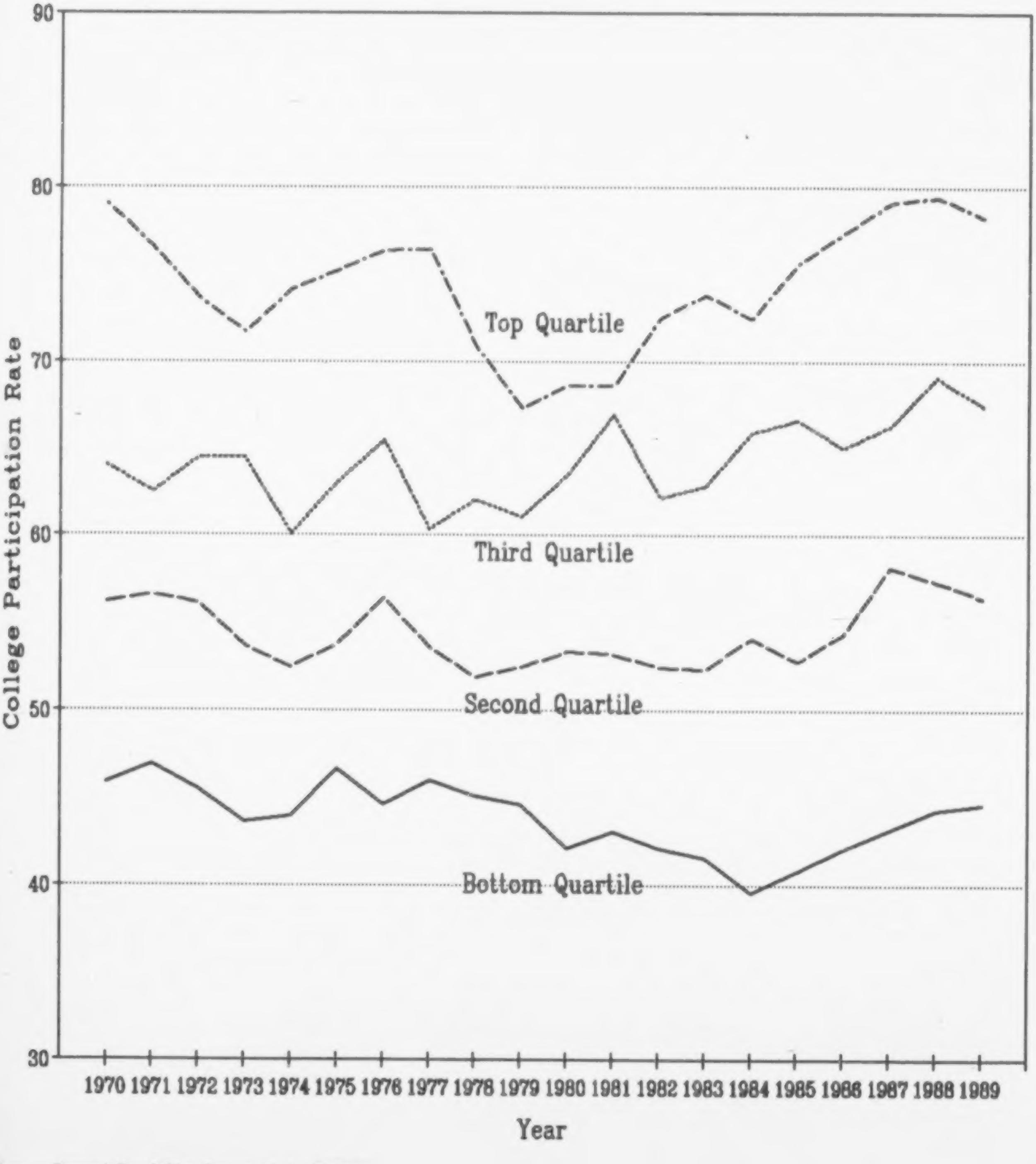
The disparity between the top and bottom quartiles narrowed between 1970 and 1979, then widened during the 1980s as shown in Figure D. In 1970 the college participation rate gap for the bottom quartile stood at 33 percent. By 1979 it had closed to 23 percent before reopening to 36 percent by 1987. Between 1985 and 1989, the disparity in the college participation of high school graduates from low and high family income backgrounds was greater than it had been at any time during the last two decades.

One way to understand the growing gap in higher educational participation between high school graduates from low and high family income backgrounds is to track the changes between 1979 and 1989 from the four quartiles of the family income distribution. Overall, college participation among unmarried 18 to 24 year old high school graduates increased by 611,000 between 1979 and 1989. From the top quartile of family income, changes in college participation rates between 1979 and 1989 meant that 312,000 more young adults had or were attending college. From the third quartile 183,000 more were participating in college. From the second quartile 114,000 more were participating. But from the bottom quartile only 1,000 more were participating. This, despite equal sizes of family income quartiles of high school graduates.

Forms of participation. College participation for young adults takes three mutually exclusive forms in the Census Bureau's use: currently enrolled in college, no longer enrolled and having completed 1 to 3 years of college, and no longer enrolled and having completed 4 years or more of college. We have analyzed each of these behaviors by quartiles of family income as well.

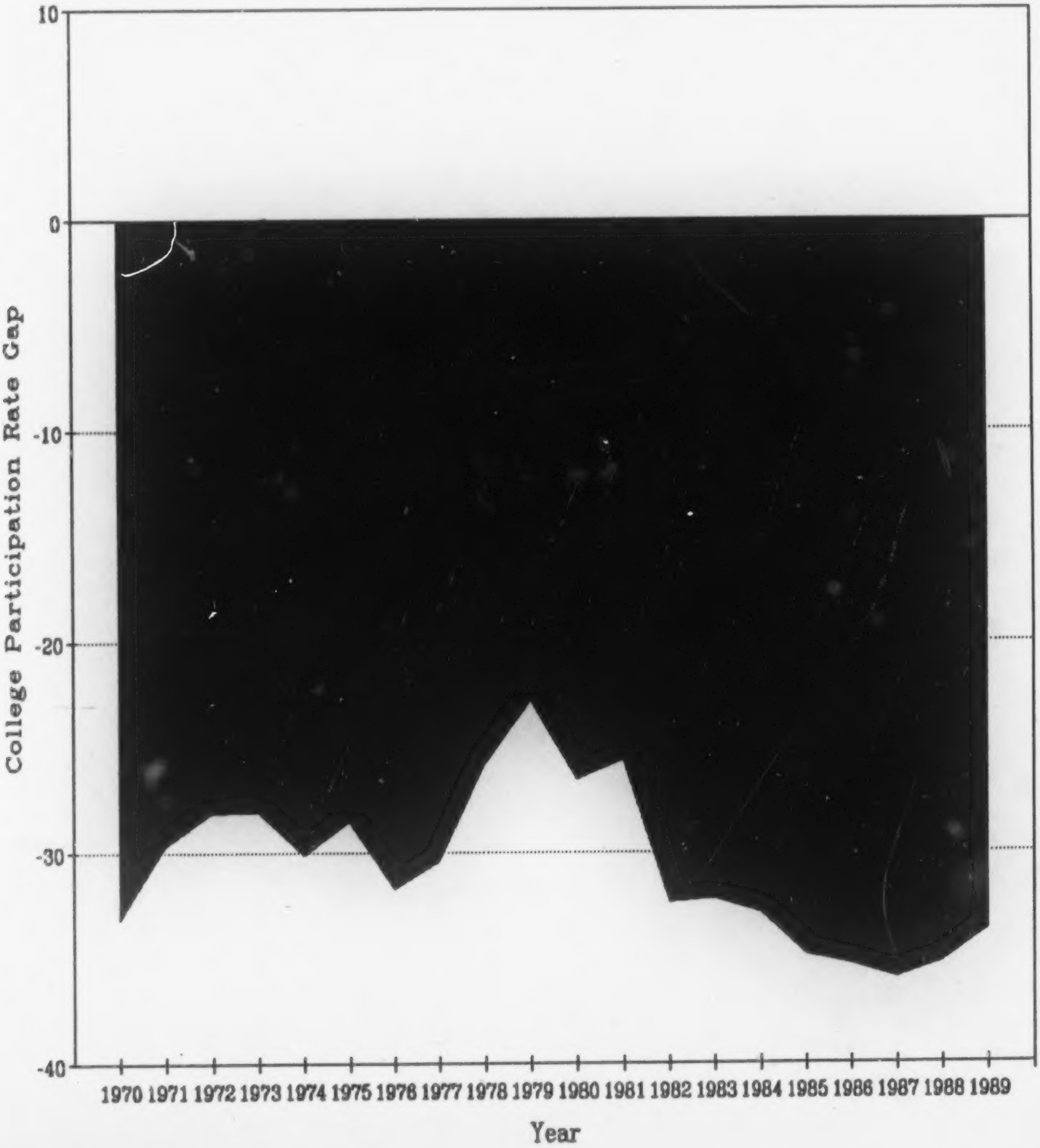
College enrollment rates for unmarried 18 to 24 year old high school graduates are shown in Figure E. Enrollment is a subset of participation and therefore these rates are similar to but lower than participation rates. The strong relationship with family income is apparent again: the highest enrollment rates are at the highest income level, and the lowest enrollment rates are at the lowest level. Moreover, the gap in enrollment rates between high and low family income young adults narrowed slightly during the 1970s and has clearly widened during the 1980s as shown in Figure F.

FIGURE C
COLLEGE PARTICIPATION RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED 18 TO 24 YEAR OLD HIGH SCHOOL GRADUATES
1970 TO 1989



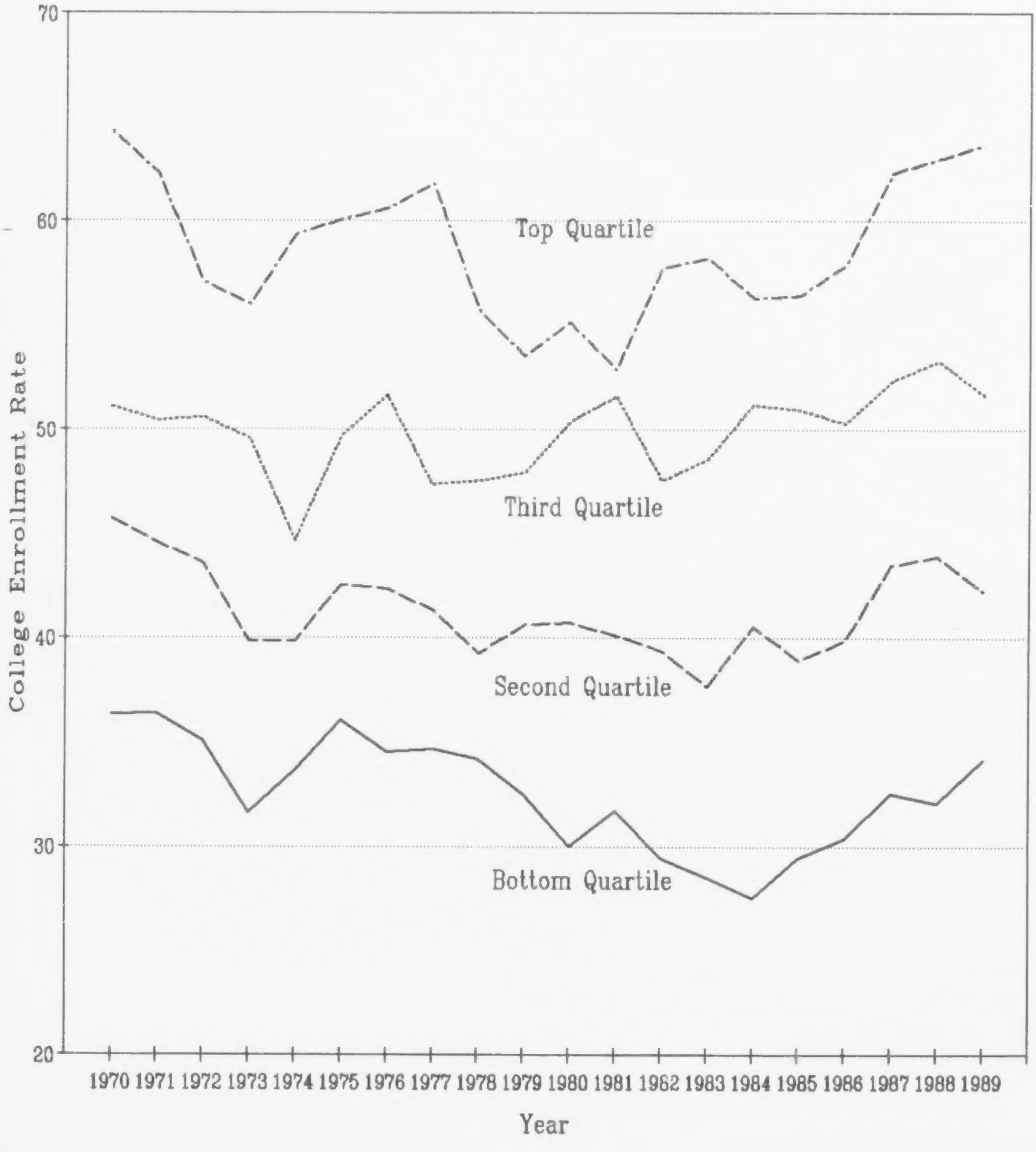
Source: Current Population Survey, Series P-20.

FIGURE D
COLLEGE PARTICIPATION RATE GAP FOR BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED HIGH SCHOOL GRADUATES
1970 TO 1989



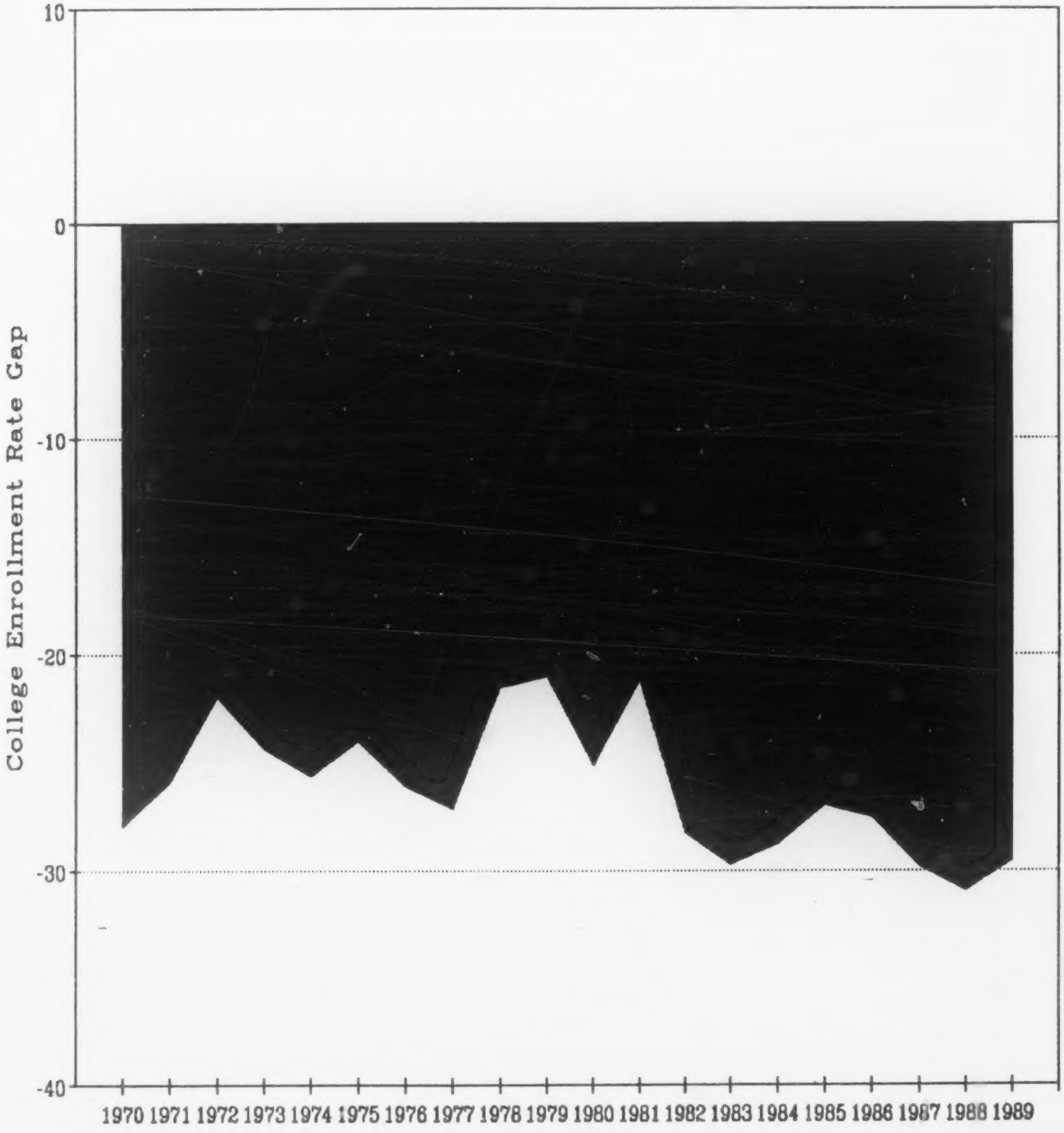
Source: Current Population Survey, Series P-20.

FIGURE E
COLLEGE ENROLLMENT RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED HIGH SCHOOL GRADUATES AGE 18 TO 24
1970 TO 1989



Source: Current Population Survey, Series P-20.

FIGURE F
COLLEGE ENROLLMENT RATE GAP FOR BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED HIGH SCHOOL GRADUATES
1970 TO 1989



Source: Current Population Survey, Series P-20.

One to three years of college rates are difficult to express graphically, but the trends by quartile are important and shown in Figure G. The proportion of unmarried 18 to 24 year old high school graduates from the bottom two family income quartiles that reported that they had completed one to three years of college and were no longer enrolled has increased during the last twenty years. Conversely, the proportion of top family income quartile young adults reporting this has decreased during the last two decades. Young adults from the bottom two quartiles are leaving higher education before obtaining their baccalaureate degree at an increasing rate, while those from the top quartile are leaving with 1 to 3 years of college at a decreasing rate.

Four year college completion rates for unmarried 18 to 24 year olds who are high school graduates are shown in Figure H by family income quartiles. These rates, like all rates calculated and graphed in this study, vary directly with family income: 4 year college completion rates are highest in the top quartile of family income and generally increased during the 1980s, and the rates are lowest and generally decreased during the 1980s in the bottom family income quartile. As a result, the gap in the four year college completion rates, which narrowed during the 1970s, widened sharply during the 1980s as shown in Figure I.

Enrollment by institutional control. Our data permit us to calculate public and private shares of higher educational enrollments by family income levels for the last twenty years. We have done so in Figure J for public institutions (the complement to which would be private higher educational shares from each quartile). In general, public higher educational institutions enroll somewhat larger shares of lower quartile students than they do shares of higher family income students. These results are consistent across the time series.

There is no overall trend in the bottom two quartiles. Public colleges enrolled about 82 percent from the bottom quartile, and 79 percent from the second quartile over the last two decades. In the top two quartiles, however, there was a small but significant shift in enrollments from private to public colleges. In the top quartile the trend is fairly consistent between 1971 and 1989. However, in the third quartile, where family incomes ranged between $35,400 and $58,100 in 1989, this shift has been more pronounced and has occurred entirely during the 1980s.

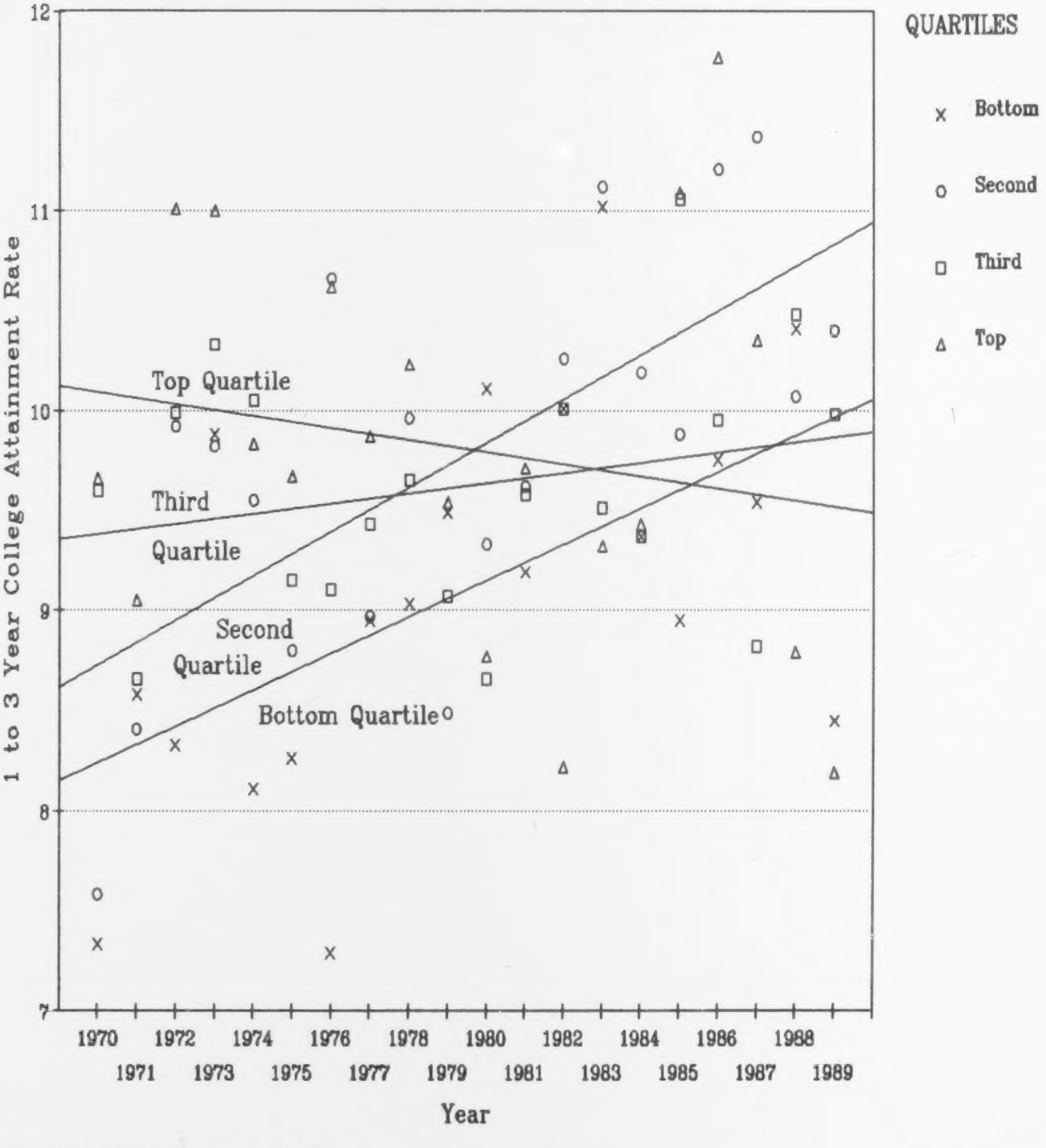
Enrollment by status. Among all income quartiles there has been a pronounced decrease in full-time college enrollment, and a corresponding increase in part-time enrollment in higher education, over the last twenty years. However, as shown in Figure K, the rate of change varies by family income, and in the direction consistent with everything reported elsewhere in this paper. Top family income quartile students have shifted least to part-time study, while bottom family income quartile students have made the greatest shift over the last twenty years. This shift to part-time study increases the length of time required to complete a baccalaureate program of studies, and thereby also increases the costs of obtaining such a degree.

Baccalaureate Degree Attainment

For those who start college, chances of earning a bachelor's degree by age 24 are, once again, directly related to family income. In this case we have used data obtained from the 1980 High School and Beyond study maintained by the Department of Education. The results, shown in Figure L, show the proportion of 1980 high school graduates who went to college that earned a bachelors degree by the spring of 1986 in what are approximately the family income quartiles used in this study. The chances range from about 21 percent in the bottom quartile, to 46 percent in the top quartile.

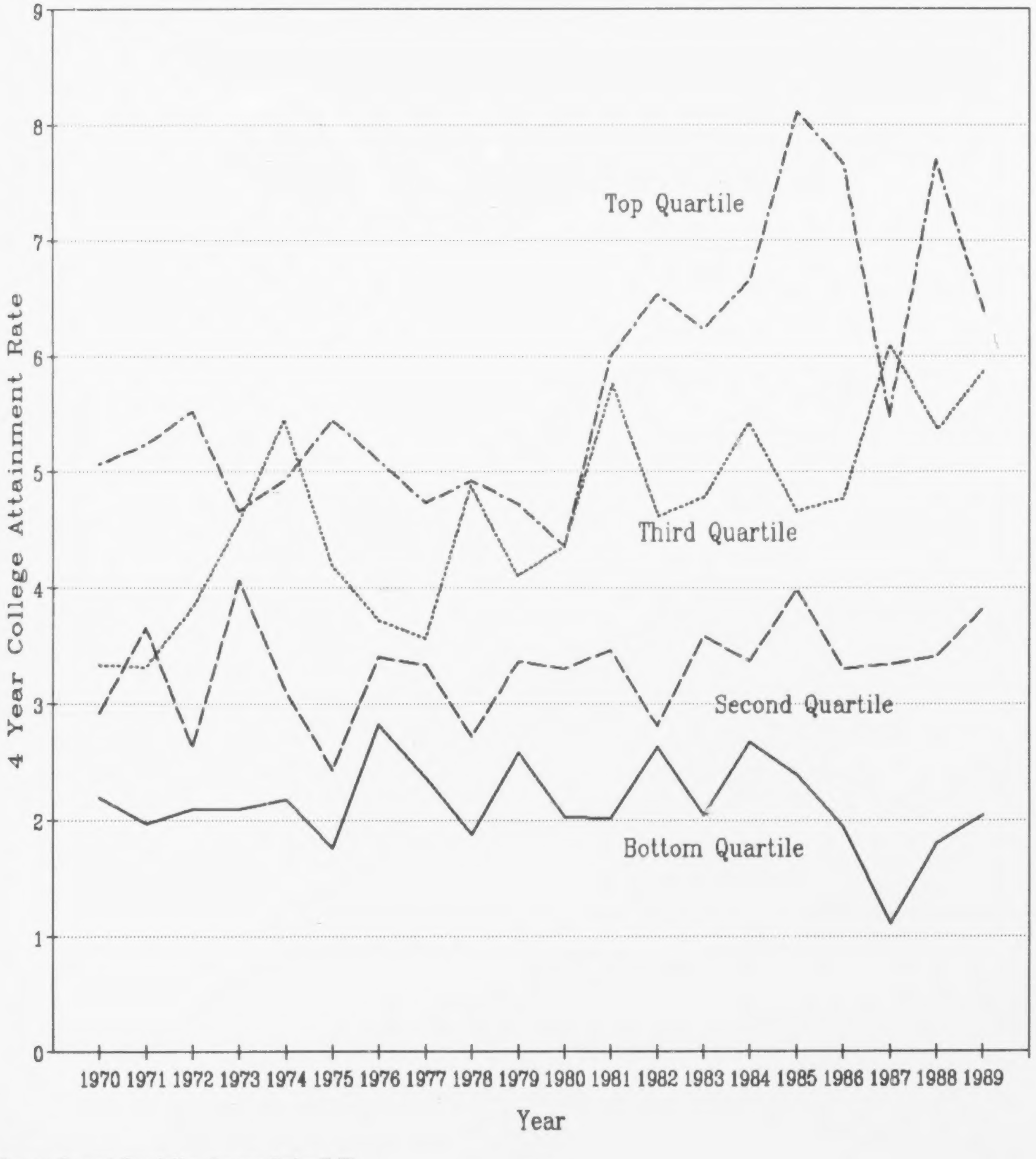
FIGURE G

1 TO 3 YEARS COLLEGE ATTAINMENT RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED HIGH SCHOOL GRADUATES AGE 18 TO 24 1970 TO 1989



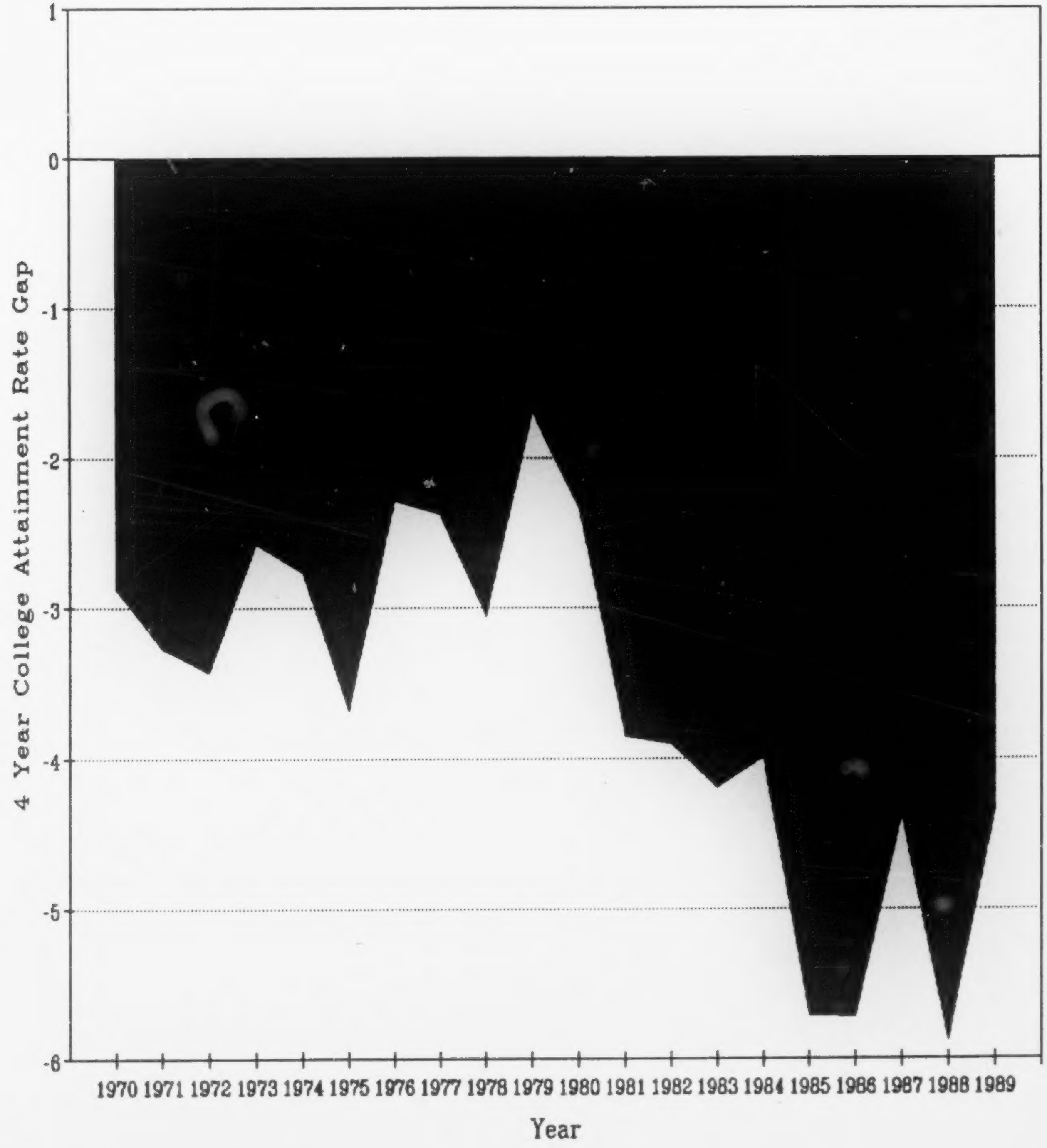
Source: Current Population Survey, Series P-20.

FIGURE H
4 YEAR COLLEGE ATTAINMENT RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED HIGH SCHOOL GRADUATES AGE 18 TO 24
1970 TO 1989



Source: Current Population Survey, Series P-20.

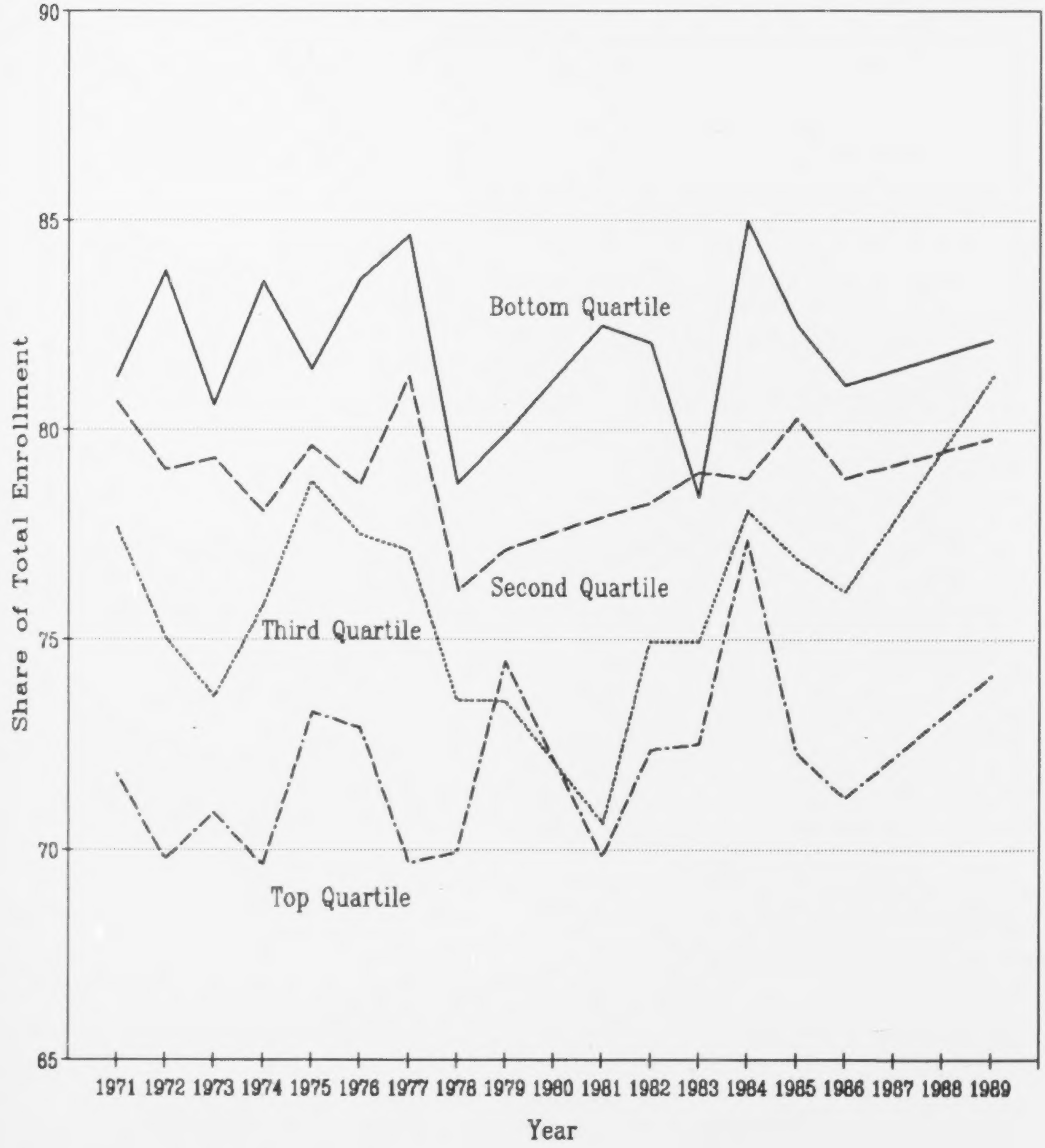
FIGURE I
4 YEAR COLLEGE ATTAINMENT RATE GAP FOR BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED HIGH SCHOOL GRADUATES
1970 TO 1989



Source: Current Population Survey, Series P-20.

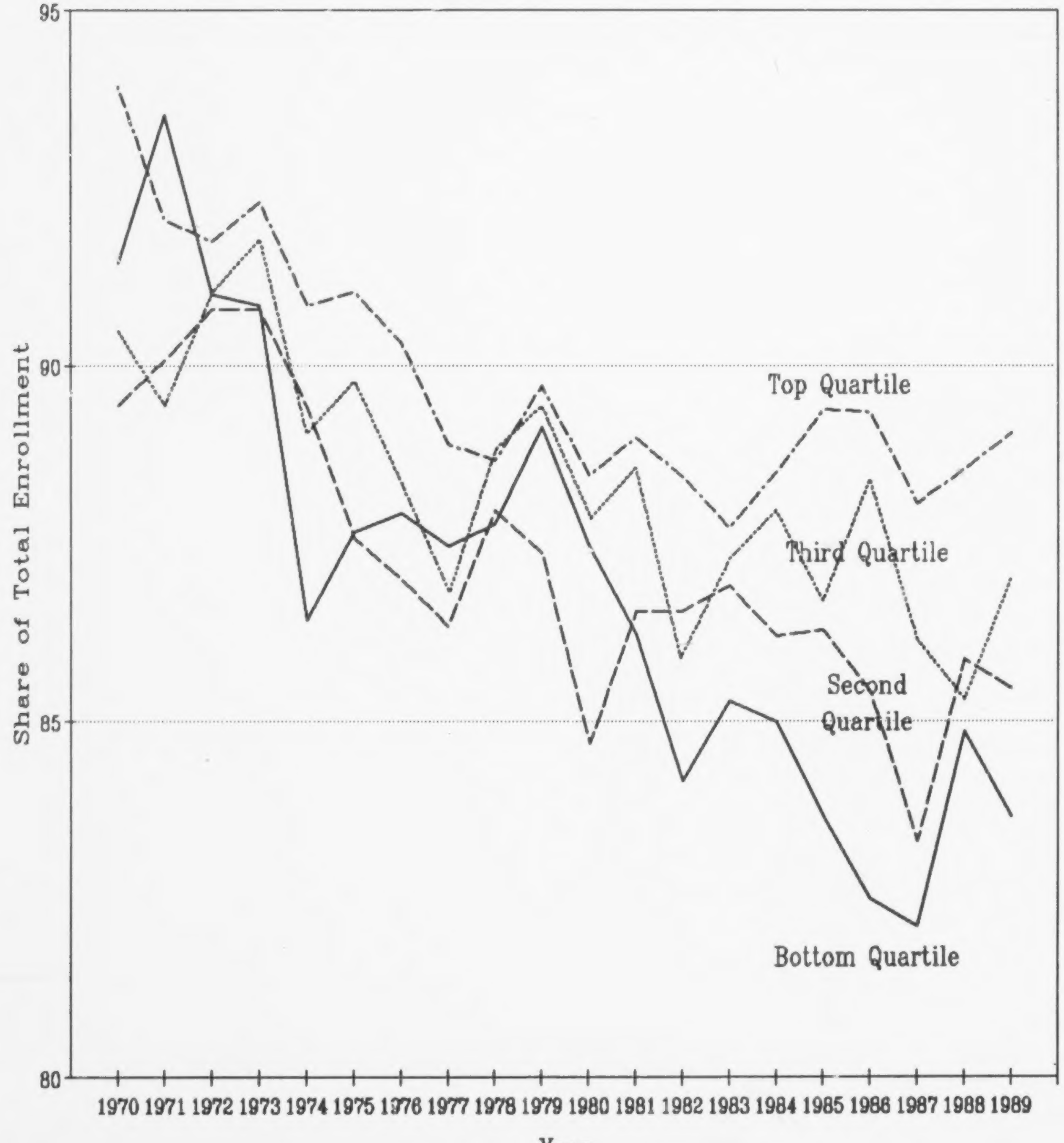
FIGURE J

PUBLIC COLLEGE SHARE OF HIGHER EDUCATIONAL ENROLLMENTS BY FAMILY INCOME QUARTILES FOR UNMARRIED HIGH SCHOOL GRADUATES 1971 TO 1989



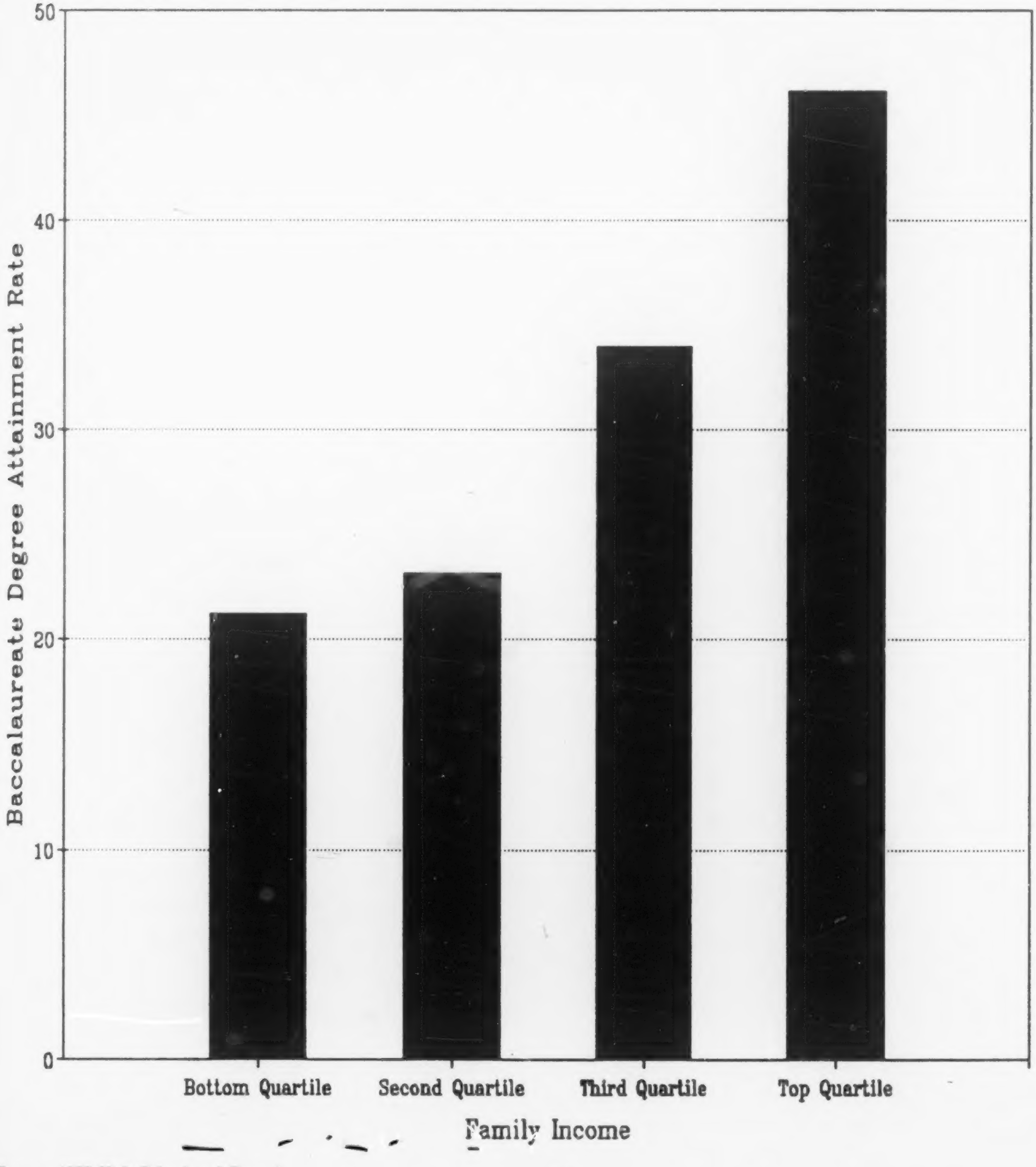
Source: Current Population Survey, Series P-20.

FIGURE K
FULL TIME ENROLLMENT SHARE OF TOTAL ENROLLMENTS BY FAMILY INCOME QUARTILES FOR UNMARRIED HIGH SCHOOL GRADUATES
1970 TO 1989



Source: Current Population Survey, Series P-20.

FIGURE L
BACCALAUREATE DEGREE ATTAINMENT RATES BY FAMILY INCOME FOR 1980 HIGH SCHOOL GRADUATES WHO STARTED COLLEGE
SPRING, 1986



Source: 1980 High School and Beyond.

Chances for College

Thus far we have calculated the separate chances for young adults from different family income backgrounds to graduate from high school, then to matriculate in college for those who graduate from high school, and finally to earn a baccalaureate degree by age 24 for those who start college. We may cumulate these conditional probabilities to determine what chances young adults from different family income backgrounds have of getting into college. This is especially important in assessing the combined effects of Title I programs designed to assist low income children in elementary and secondary education and the effects of Title IV programs designed to assist young adults from low family income backgrounds gain access to higher education.

Figure M combines the high school graduation rate and the college participation rates for each family income quartile over the last twenty years. The results magnify the disparities present in the separate rates. In 1989 a young adult from the top quartile of the family income distribution had a 73 percent chance to both graduate from high school and enroll in college, compared to 60 percent from the third quartile, 46 percent from the second quartile, and 29 percent from the bottom quartile.

During the last twenty years the chances for college of a young adult from the bottom two family income quartiles have been largely flat. Especially in the bottom quartile, where federal programs to improve the educational opportunities for children and young adults have been focused during the last two decades, gains are largely absent. And compared to the top quartile, where changes in school enrollment behavior are influenced largely by labor market conditions, equality of opportunity to attend college has clearly suffered during the 1980s, as shown in Figure N.

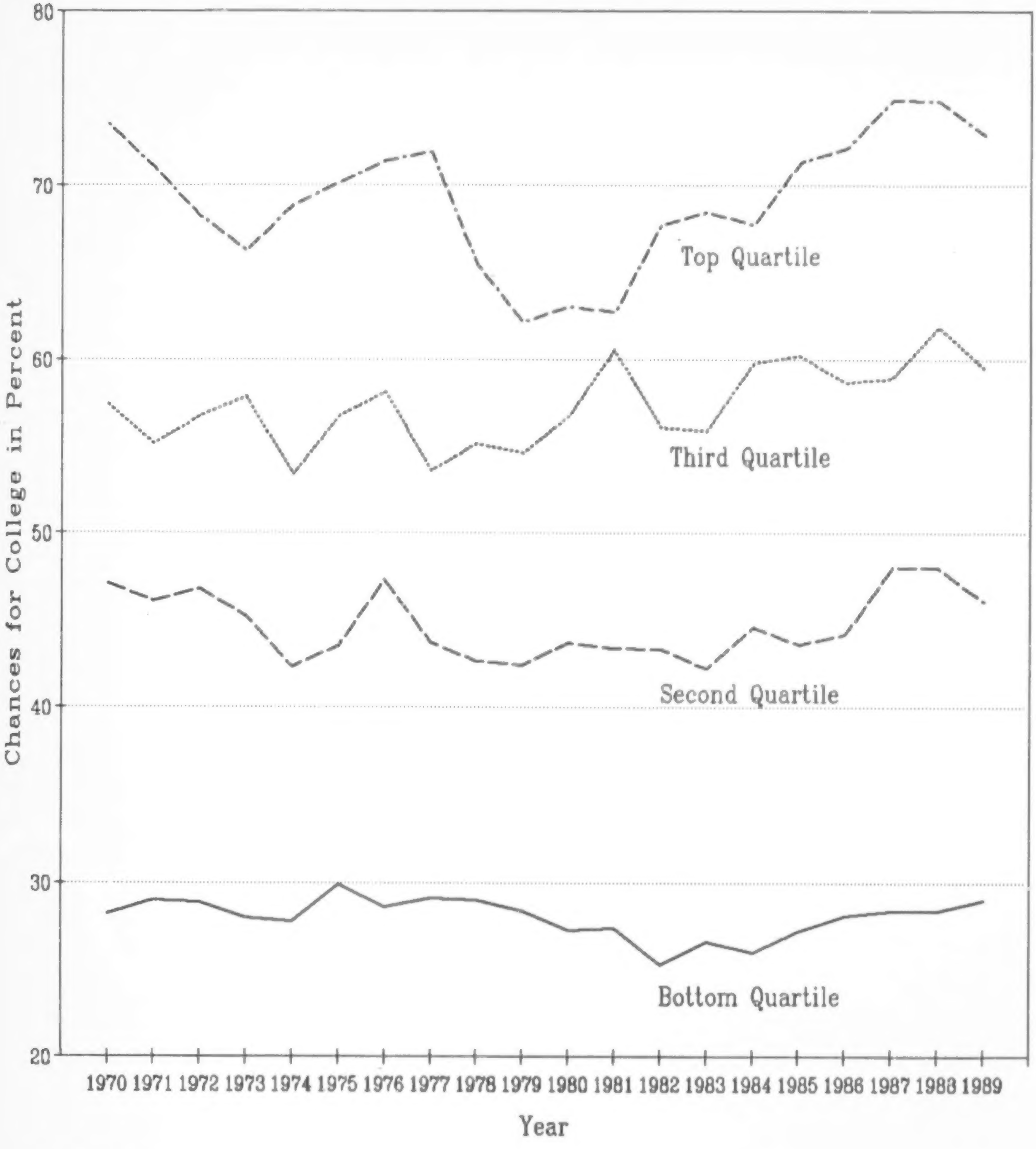
Finally, we combine high school graduation rates, college participation rates, and baccalaureate degree attainment rates in Figure O for each quartile for each of the last twenty years. These results summarize the entire study. They show significant gains in the chances of young adults from the top two quartiles of family income to earn a baccalaureate degree over the last two decades. They show virtually no gain for a person from the second quartile of family income. And, despite the massive federal intervention on behalf of students from low family income backgrounds, the chances for a baccalaureate degree by age 24 have actually decreased, especially during the late 1980s.

During the latter half of the 1980s, an unmarried young adult from the top quartile of family income had an eight to thirteen times better chance of earning a baccalaureate degree by age 24 than did another young adult from the bottom quartile of family income. The gap in the chance for a four year college degree for a student from a low family income background narrowed during the 1970s, from about a six times greater advantage for the high income young adult in 1970, to four times by 1979. After 1979, however, the gap opened wider than ever. Partly this was the result in a deterioration in college participation rates, and mostly this was the result of a deterioration in four year college completion rates.

Considerations for Public Policy

Over the twenty years of this study, three general conclusions stand out. First, the disparities between family income levels in educational attainment are large, pervasive, persistent, and growing. At every step in the educational process, the odds for advancement strongly favor those from highest family income backgrounds and disfavor those from lowest family income backgrounds. This is true for the population as a

FIGURE M
CHANCE FOR COLLEGE BY FAMILY INCOME QUARTILES FOR UNMARRIED 18 TO 24 YEAR OLDS
1970 TO 1989



Source: Calculated from study data.

FIGURE N
CHANCE FOR COLLEGE GAP FOR BOTTOM FAMILY INCOME QUARTILE FOR UNMARRIED 18 TO 24 YEAR OLDS
1970 TO 1989

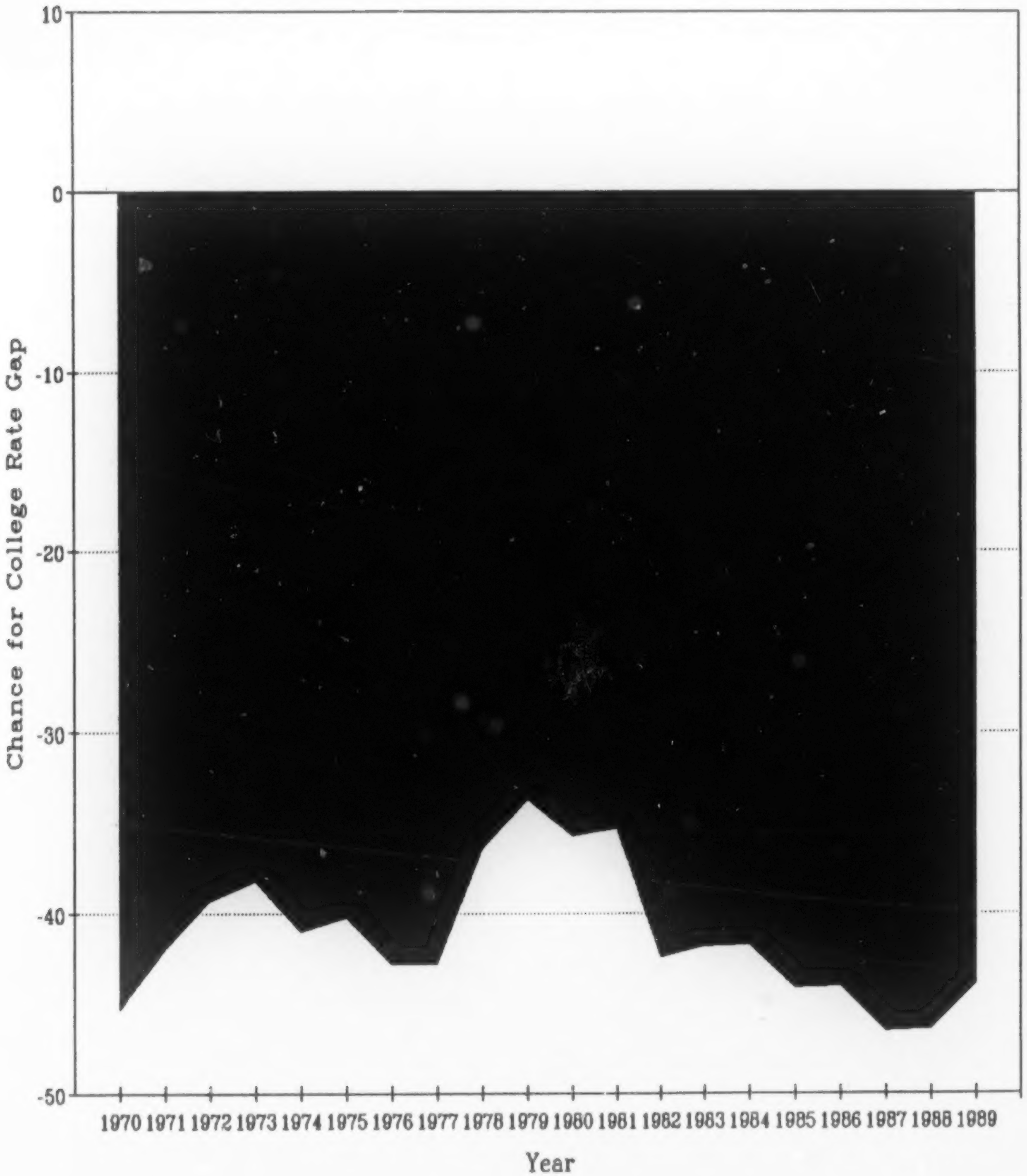
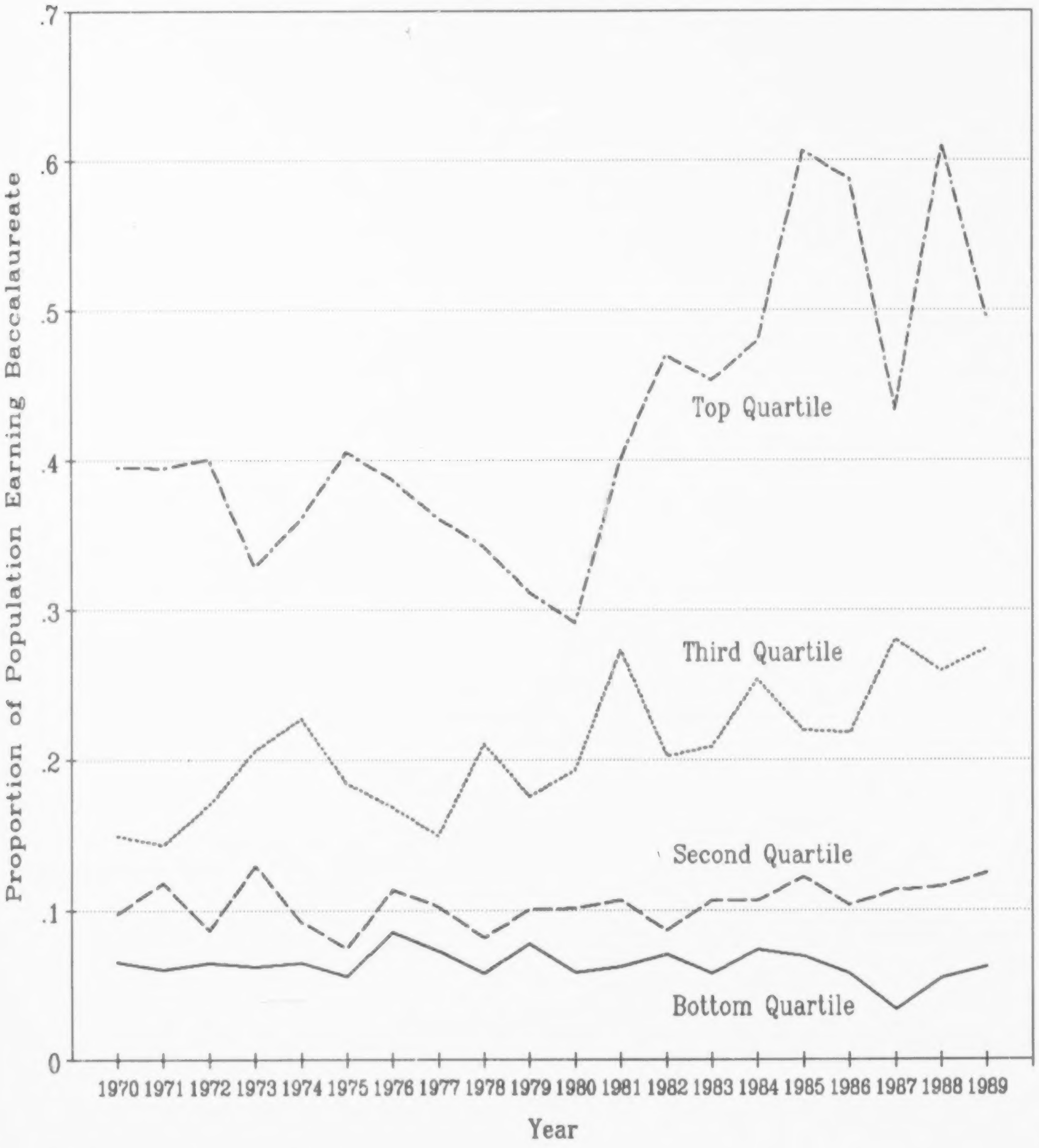


FIGURE 0
ESTIMATED CHANCES FOR A BACCALAUREATE DEGREE BY AGE 24 BY FAMILY INCOME QUARTILE
1970 TO 1989



Source: Data developed in tables, plus estimates.

whole, for men, women, whites, blacks, and Hispanics. It holds throughout the twenty year period of this study. And the gap between those from low and high incomes is growing: in the latter half of the 1980s it is wider than it has been at any time during the last two decades.

Second, the overall gains in educational attainment for students from low family income backgrounds have been small, transitory, and often offset by losses elsewhere. The high school graduation rate for bottom quartile students increased slightly between 1970 and 1989, but this gain was offset by a decline in the college participation rate during the same period of time. Gains for females were offset by losses for males. Relative gains in college participation rates during the 1970s were lost during the 1980s. The chances of a student from a low family income background earning a baccalaureate degree by age 24 were actually lower in the late 1980s than they were in the early 1970s. At higher family income levels, increases in educational attainment become more apparent, and in fact above median family income these increases are quite remarkable. But federal programs were not targeted on students from above median family incomes--they were targeted on those from low family income backgrounds. And in the aggregate, the results are profoundly disappointing: low family income students actually lost substantial ground compared to high family income students during the 1980s.

The third conclusion one may reasonably draw from the findings is that certain low income groups within the population have made progress in high school graduation and college participation during the last twenty years. These groups are females from low family income backgrounds and blacks from incomes below the median. However, for both females and blacks the gains were made between 1970 and 1975 and gains did not continue thereafter.

On balance, many anticipated that there would be broad and substantial signs of success resulting from massive federal investments in educational opportunities for low family income students through Title I of the Elementary and Secondary Education Act and Title IV of the Higher Education Act. These data did not produce those signs of broad and substantial success. If the federal programs had been successful there would have been at least an increase in the level of participation of disadvantaged students. At best the increase in participation would have been at a higher ratio than the rest of the poulation, thus closing the gap between the disadvantaged students and the rest of the population. Every effort was made to look at all the possible indicators of participation, beginning with the obvious change in high school graduation rates. College participation was further decided by those who attended college and those who earned a four year degree. A further analysis was made for part-time versus full-time students and for public versus private college participation. Evidently, the key to increasing the participation of disadvantage students in higher education goes beyond additional funding for the K-12 system and funding for college expenses. While such funding is obviously necessary for these students who lack financial resources to pay these bills, it will take more than money to accomplish the worthy public policy goal.

HIGH SCHOOL GRADUATION AND COLLEGE PARTICIPATION OF YOUNG ADULTS BY FAMILY INCOME BACKGROUNDS
1970 TO 1989

Thomas G. Mortenson
Zhijun Wu
American College Testing

I. Introduction and Background

The Issue

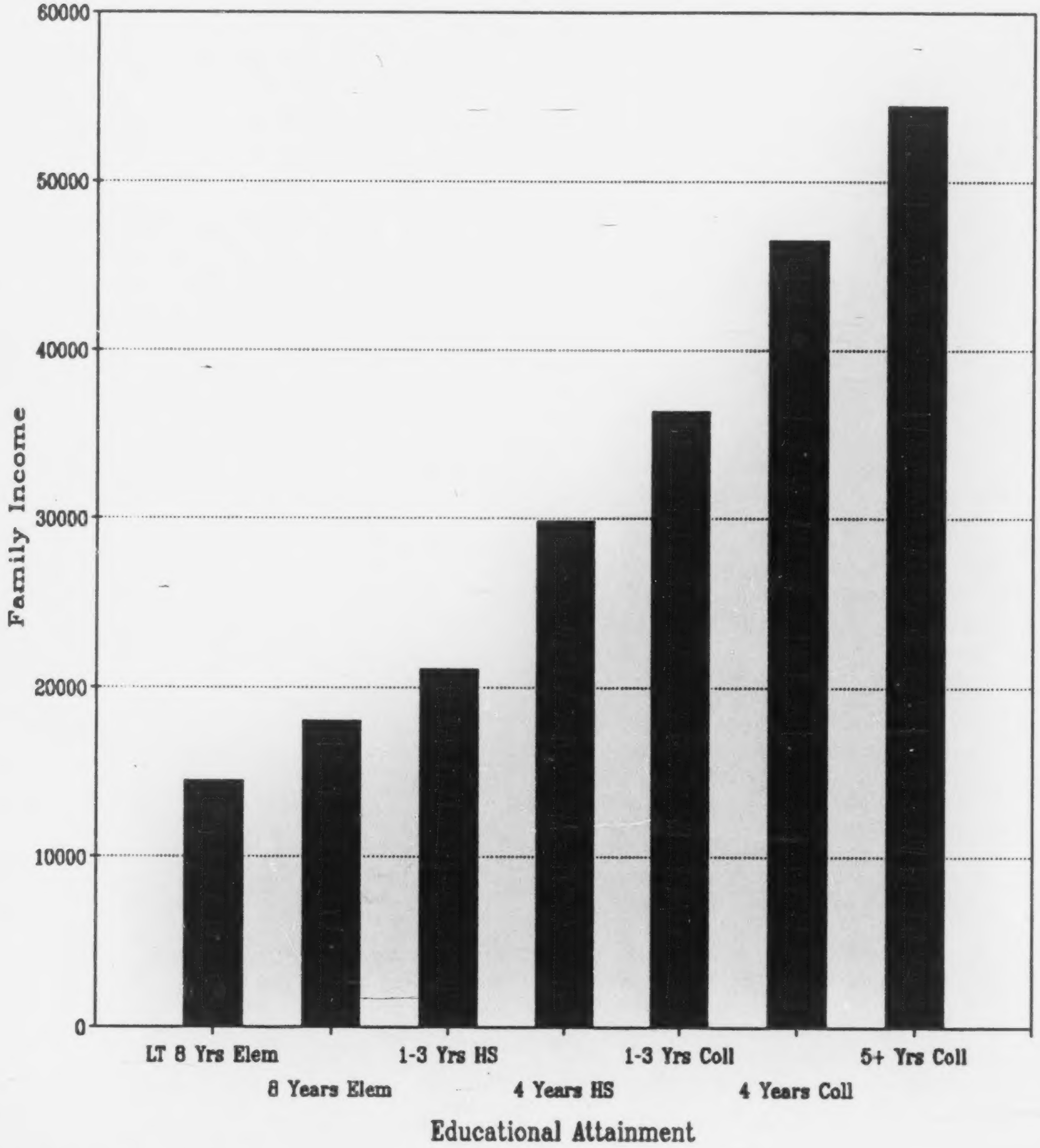
A central provision of the American social contract stipulates that education is the means by which an able and motivated citizen can expect to advance his or her position and condition in life. This social contract provision is justified from a collective perspective by the wealth-generating returns on human capital investments that accrue to society generally, the educated citizenry needed to make the political system function, and the social need to stabilize an economic system characterized by the destabilizing influence of extremes in the distribution of well-being. For the individual, educational attainment is strongly associated with employment and unemployment, occupation, income, wealth, social status, recreation and entertainment, health and sickness, life expectancy, happiness, voting, and community involvement (Mortenson, 1990). The socially approved means to these ends is through education, and government at every level is committed to the provision of educational opportunity for its citizens.

We can measure well-being in summary fashion. Income is a commonly accepted measure of our individual and collective well-being. Family income is strongly associated with educational attainment of the head of the household, as shown in Figure 1 for 1987. In 1987, family incomes averaged $29,937 for families headed by high school graduates, compared to $50,115 for families headed by college graduates. By this summary measure, families with greater levels of educational attainment are better off on average than are families with lesser levels of education.

During the last two decades, the relationship between education and personal well-being (as measured by income) strengthened as real income growth was limited largely to families headed by persons with four or more years of college, as shown in Figure 2. Overall, family income growth in the United States stopped about 1973. However, not all family types have been affected equally. Real income growth is income minus inflation's bite. Because the remainder was positive for families headed by college graduates, their living standards improved. The incomes of families headed by persons with lesser levels of educational attainment increased, but not as fast as inflation, and these families thus experienced substantial declines in their standard of living after the early 1970s, as shown in Figure 3.

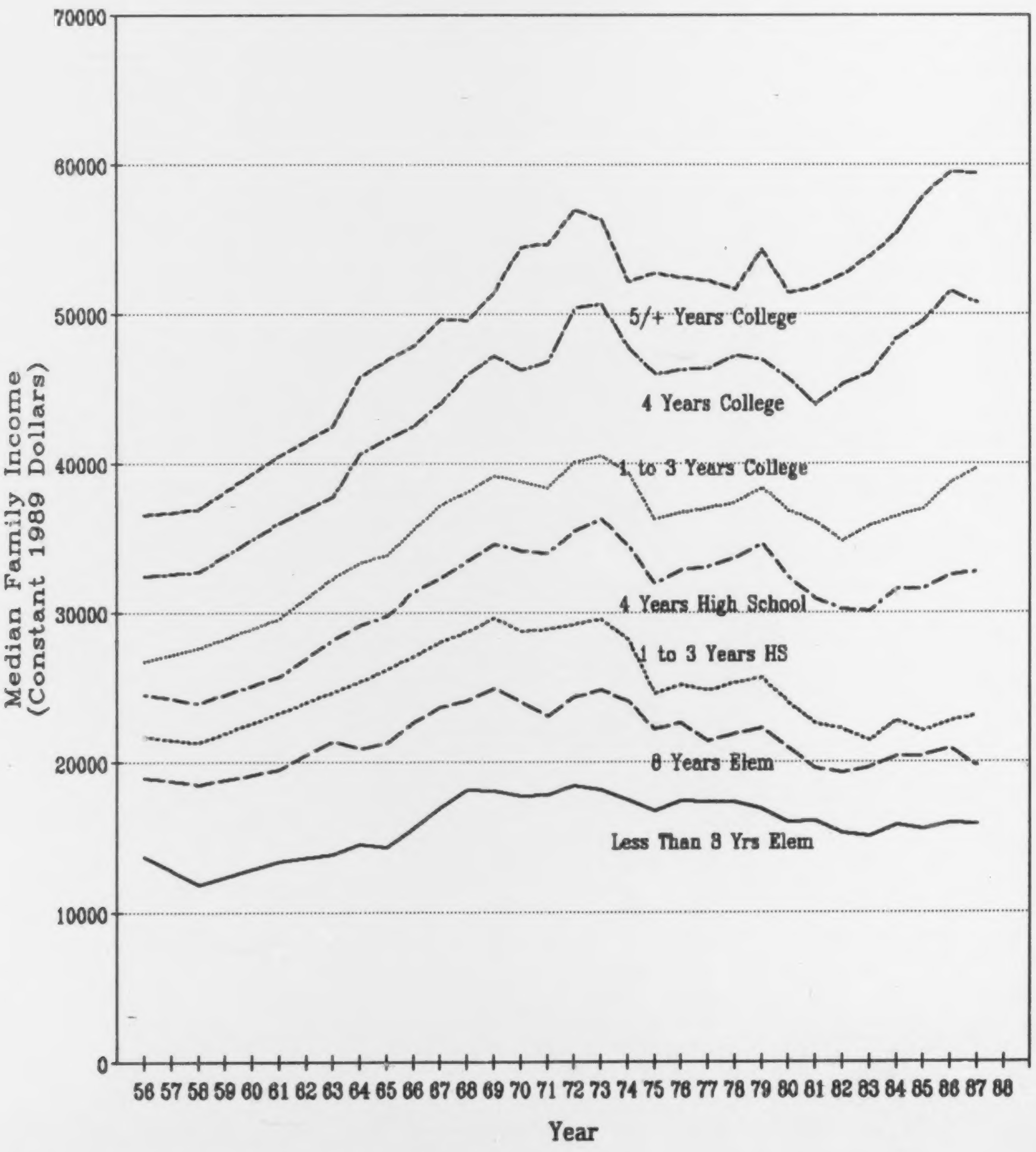
Because of the key role of education in determining position and condition in adult life, a fundamental concern of federal educational policy since 1965 has been to see that educational opportunity is available to all Americans (Eidenberg and Morey, 1969, and Gladieux and Wolanin, 1976). That is to say, no American should be limited in his or her opportunities to seek to improve their well-being through education as a result of constraining circumstances of their birth, such as race, gender, location, or income.

FIGURE 1
MEDIAN FAMILY INCOME
BY EDUCATIONAL ATTAINMENT OF HOUSEHOLDER
1987



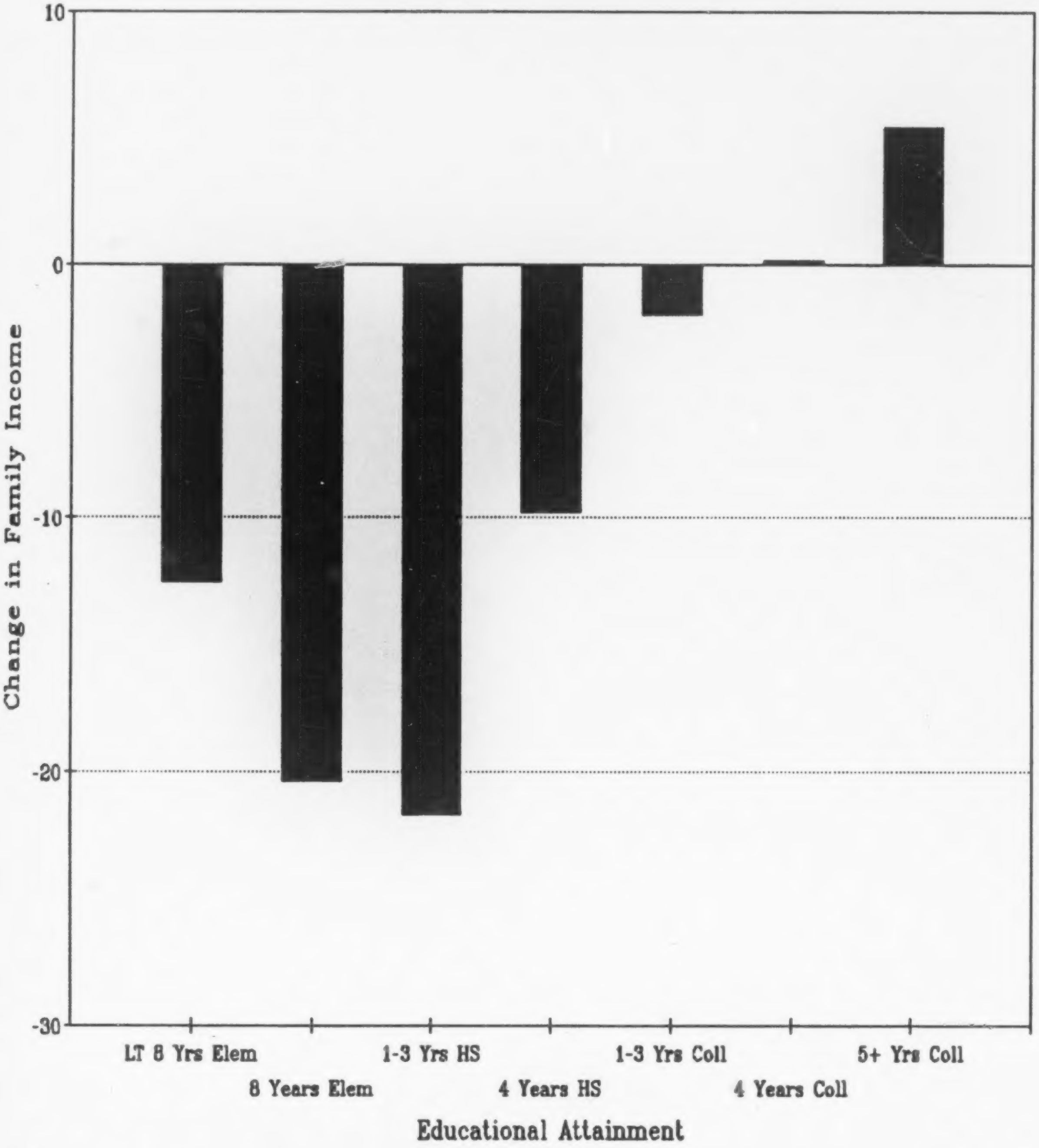
Source: Current Population Reports, Consumer Income, Series P-60.

FIGURE 2
MEDIAN FAMILY INCOME
BY EDUCATIONAL ATTAINMENT OF HOUSEHOLDER
1956 TO 1988



Source: Current Population Reports, Consumer Income, Series P-60.

FIGURE 3
CHANGE IN MEDIAN FAMILY INCOME BY EDUCATIONAL ATTAINMENT OF HOUSEHOLDER BETWEEN 1973 AND 1987



Source: Current Population Reports, Consumer Income, Series P-60.

In this study, we examine the relationship between family income background and educational attainment among young adults over the last two decades. We examine trends and patterns in high school graduation and college participation among 18 to 24 year olds from different family income backgrounds. We accept as given that high school graduation and college participation are necessary conditions to earning the baccalaureate degree from college that provides access to the greatest opportunities of American life.

Public Policy Background

In 1964 and 1965 Congress passed a series of laws that had as their central objective the reduction in poverty in the United States. The War on Poverty had three major themes: to increase the human capital of the poor, to remove irrelevant barriers to employment, and to stimulate the economy to generate more jobs. Examples of the legislation that constituted the program included the Economic Opportunity and Civil Rights Acts in 1964, and the Voting Rights, Medicare, Elementary and Secondary Education, and Higher Education Acts in 1965.

The Elementary and Secondary Education Act and the Higher Education Act were principal components of President Johnson's program. These two laws defined the central concerns and interests of the federal government in education. Principally through these two laws the federal government sought to expand educational opportunity for students from limited family income backgrounds.

Elementary and Secondary Education Act of 1965. While America has always stood by a commitment to education for its citizens, the matter of its delivery has been contested. During the nineteenth century this debate focused on public versus private education. During the twentieth century the concerns shifted to matters of finance and the appropriate role of the federal government in financing elementary and secondary education. In the nineteenth century public schools were locally financed and governed. During the twentieth century states entered the financing picture and assumed an increasing share of the responsibility.

As state and local governmental financing increased, the question of the federal role was debated. The variation in tax resources between school districts and between states was obvious. In 1946 Senator Robert Taft articulated what was to become a fundamental rationale for federal involvement in all education in 1965:

> **Education is primarily a state function—but in the field of education, as in the fields of health, relief, and medical care, the federal government has a secondary obligation to see that there is a basic floor under those essential services for all adults and children in the United States.**

Following World War II, several issues divided the groups favoring general financial assistance to elementary and secondary education. One was race--federal funds could not be used to support segregated school systems. Another was aid to private and parochial schools, especially Catholic schools. A third obstacle was reluctance by some to involve the federal government in state matters.

By 1965, however, a Catholic president had articulated a church-state separation position, his assassination had generated a ground swell of sympathy, and the 1964 congressional elections had greatly increased the number of members of Congress prepared to vote for general aid to elementary and secondary education. The debate first dropped from consideration whether there was a federal role, and focused on whether the federal role should include aid to private and parochial schools. These positions softened as a compromise formula focusing funds on students rather than schools was developed. In particular, the allocation of federal funds was to be based on the number of children in impoverished families living in each independent school district. The funds were thus tied to the poverty program under the child-benefit theory.

The Elementary and Secondary Education Act of 1965 contained five major titles. Of the initial authorization of $1.3 billion, $1.06 billion or 81 percent of the total was for Title I. Under this title, funds were to be spent in areas with concentrations of very low income families (less than $7700 per year in 1989 dollars). This affected 94 percent of the nation's school districts in 1965. The federal dollars were provided for equipment, classroom construction, and staff additions. Nonpublic students were provided benefits through services such as educational radio and television, dual enrollment programs, and mobile educational services and equipment. (Eidenberg and Morey, 1969)

The focus in 1965 remains the federal focus today. Federal support for elementary and secondary education remains focused on Title I programs that support educational opportunities for students from low family income backgrounds and having other disadvantages in education. The current version of Title I as contained in the federal code sets out the federal government's policy and purpose as follows:

> Declaration of Policy
>
> **In recognition of (1) the special educational needs of children of low-income families and the impact of concentrations of low-income families on the ability of local educational agencies to provide educational programs which meet such needs, and (2) the special educational needs of children of migrant parents, of Indian children, and of handicapped, neglected, and delinquent children, the Congress declares it to be the policy of the United States to (A) provide financial assistance to State and local educational agencies to meet the special needs of such educationally deprived children at the preschool, elementary, and secondary levels; (B) expand the program authorized by this division over the next 5 years by increasing funding for this division by at least $500,000,000 over baseline each fiscal year and thereby increasing the percentage of eligible children served in each fiscal year with the intent of serving all eligible children by fiscal year 1993; and (C) provide such assistance in a way which eliminates unnecessary administrative burden and paperwork and overly prescriptive regulations and provides flexibility to State and local educational agencies in making educational decisions.**
>
> Statement of Purpose
>
> **The purpose of the assistance under this division is to improve the educational opportunities of educationally deprived children by helping such children succeed in the regular program of the local educational agency, attain grade-level proficiency, and improve achievement in basic and more advanced skills. These purposes shall be accomplished through such means as supplemental education programs, schoolwide programs, and the increased involvement of parents in their children's education. (20 USC 2701)**

Higher Education Act of 1965. A relatively obscure piece of legislation in the War on Poverty programs enacted by Congress in 1964 and 1965 was the Higher Education Act. Its significance lies in the shift it reflects in federal interests in higher education. Prior to 1965, the federal government was primarily concerned with manpower issues: the Morrill Act in 1862 regarding agriculture and mechanical training, the Servicemen's Readjustment Act in 1944 and phased reentry and training of returning military veterans into the civilian labor force, and the National Defense Education Act in 1958 and the education and training of scientists and engineers to compete with the Soviet Union. The 1965 law, however, initiated a federal commitment to student aid based on financial need that, for the first time, focused federal student financial aid on students from low family income backgrounds. The program that implemented this policy in 1965 was the Educational Opportunity Grant Program (which became known as the Supplemental Educational Opportunity Grant Program in 1972).

The Higher Education Act of 1965 was substantially overhauled by Congress in the 1972 Education Amendments, with the major change the creation of the Basic Educational Opportunity Grant Program. Federal financial support for student aid increased greatly throughout the remainder of the 1970s. The major federal student financial aid programs are contained in Title IV of the Act. They now include Pell Grants, Stafford Loans, Supplemental Educational Opportunity Grants, College Work-Study, Perkins Loans, and State Student Incentive Grants.

Since 1965 and 1972, the federal government's major policy objective in the finance of higher education has been to expand educational opportunity for low income students through needs tested grants and more recently loans. The federal policy of student support is based on a view of consumer choice as the best guide to institutional responsiveness to the public interest. This became the federal policy with the adoption of the 1972 Education Amendments to the Higher Education Act of 1965. This policy is also enforced through civil rights statutes that prevent discrimination against many classes of citizens. Gladieux and Wolanin, in their political history of the 1972 Amendments to the Higher Education Act of 1965 (1976), concluded the following:

> One theme above all dominates the law and the legislative history. The equalization of opportunities for higher education, a goal historically more incidental than integral to federal involvement in this field, clearly became the central commitment of the federal higher education policy with the passage of the Educational Amendments of 1972.
>
> As an abstraction, equal opportunity is implicit throughout the bill - in the provisions for community colleges and occupational education, in the state planning provisions, in the institutional aid formula. But operationally, its principal meaning was that lack of money should not be a barrier to an individual's pursuit of education or training beyond high school. Thus the equal opportunity theme is most directly expressed in the student aid provisions, which form the centerpiece of the legislation. Removing the financial barriers facing students was the overriding concern of the legislators, as it had been of the Carnegie Commission and the Rivlin Report.
>
> The law embraces a set of new and old student assistance programs designed to ensure equal access to the postsecondary system and to go far toward ensuring equality of choice among institutions ....

> Corollary to the equal opportunity theme, the law enunciates the basic policy choice that students, not institutions, are the first priority in federal support for higher education. The legislators were concerned about institutional well-being and survival, particularly of private schools, but they determined that these concerns should not be the basis of federal policy. Better, they decided, to put purchasing power in the hands of needy students and let the students make their own choices in the marketplace of postsecondary education. This strategy would have the effect of concentrating available federal resources on the students who might otherwise be barred from postsecondary opportunities; it would also, so the reasoning went, serve to make institutions more responsive to the needs and interests of such students. (Pp. 224-225)

Since 1965, these programs have been reviewed by Congress at five to six year intervals through a process of reauthorization and amendment to the existing statute. The current legislation is scheduled to expire and be reauthorized in 1991, although an automatic one year extension is available if Congress should choose to enact reauthorization legislation in 1992. This reauthorization process provides an opportunity to assess how well the needs of students from low family income backgrounds are being served by the existing array of federal, state, institutional, and privately funded student aid programs and services.

Previous Studies of Higher Educational Participation

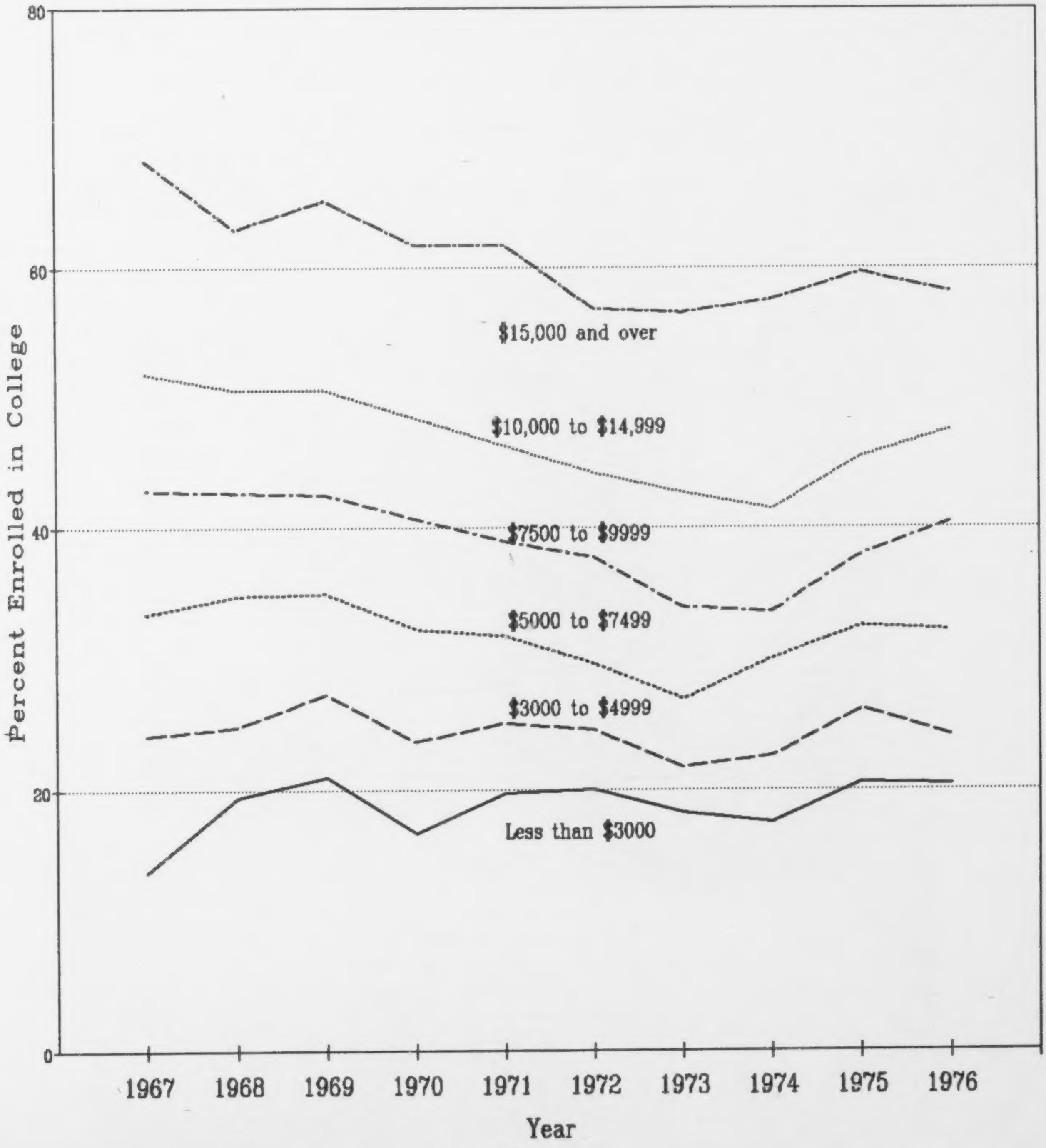
The question of higher educational participation by people from different family income levels has been studied previously by Bruno (1976), Hansen (1982), Davis and Johns (1988), and Mortenson (1989). The two latter studies reached a different conclusion from the Hansen study. Hansen's study (of which this study is an extension) found no significant effects of the infusion of federal student financial aid during the 1970s on the college participation behavior of low income students. Davis and Johns, on the other hand, found significant effects.

The study reported in the body of this paper analyzes the same set of data used by Bruno in 1976 and Hansen in 1982, and reaches a somewhat different conclusion from that reached by Hansen. Because Hansen's paper received considerable attention (Breneman, 1982, and Hook, 1982) in the partisan and bitter debates over student aid between the Reagan Administration and Congress when it was released in 1982, we will review its methods and findings here. But first we review Bruno's published data.

Bruno data. In a table appended to the 1976 Current Population Report on "School Enrollments," Bruno reported the results of carefully designed retabulations of Current Population Survey data on the college enrollment of dependent family members 18 to 24 years old by constant dollar family income for the years 1967 through 1976. (Current Population Report, P-20, No. 319) Her results have been charted in Figure 4. These results represent the rate at which the population (not only high school graduates) from different family income levels were enrolled in college over this ten year period. The results indicate declines in college enrollment rates from income levels over $5000 (in 1967 dollars), and quite flat rates for those from less than $5000.

Consistent with our illustration of equity later in this paper, we have charted in Figure 5 the difference between the college enrollment rates for those from family

FIGURE 4
COLLEGE ENROLLMENT FOR DEPENDENT FAMILY MEMBERS AGE 18 TO 24 BY FAMILY INCOME IN CONSTANT 1967 DOLLARS
1967 TO 1976

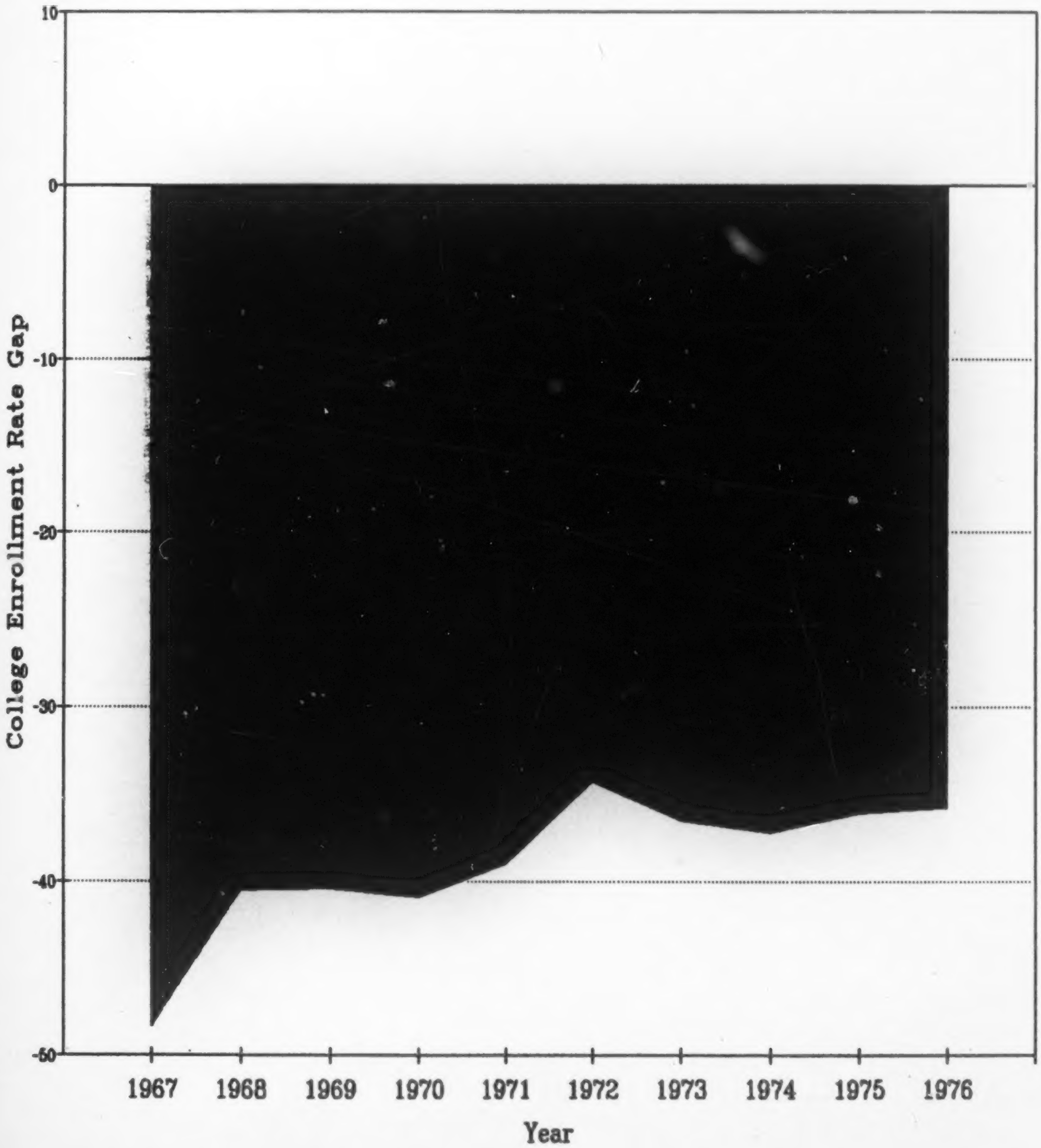


Source: Current Population Report, P-20, No. 319, p. 68.

FIGURE 5

COLLEGE ENROLLMENT RATE GAP FOR LOW FAMILY INCOME DEPENDENT FAMILY MEMBERS AGE 18 TO 24 YEARS

1967 TO 1976



Source: Current Population Report, P-20, No. 319, p. 68.

incomes over $15,000 per year and those from families with incomes of less than $5000 per year. (These correspond very roughly to the top and bottom quartiles of family income used throughout the body of this paper.) These results show a rather significant closing in the disparity between the college enrollment rates of high and low family income young adults, mainly between 1967 and 1972. Between 1972 and 1976 there was no further reduction in the gap between the rates of high and low family income young adults.

Unfortunately, the Bruno analysis has never been updated. For the ten year period that it covered, it demonstrated that the disparity between the college enrollment rates of young adults from high and low income families could be reduced. The reduction in the disparity, however, occurred only partly because of a small increase in low income college enrollment rates. Mainly, the reduction in the disparity was a result of a decline in the college enrollment rates of young adults from higher family income backgrounds. This finding will appear in the study reported in the body of this paper as well. Other findings in Bruno's analysis concerning college participation rates by gender are not summarized here but were consistent with the findings reported later in this paper.

The Hansen study. In 1982 Hansen reported results of a study that challenged his own expectation that the growth in federal student aid funding would increase the college participation rates of students from low family income backgrounds compared to the rates for students from high family income backgrounds. Hansen's analysis was based largely on the Census Bureau's Current Population Survey (CPS) reports in the P-20 series, although data from other sources were also examined and reported.

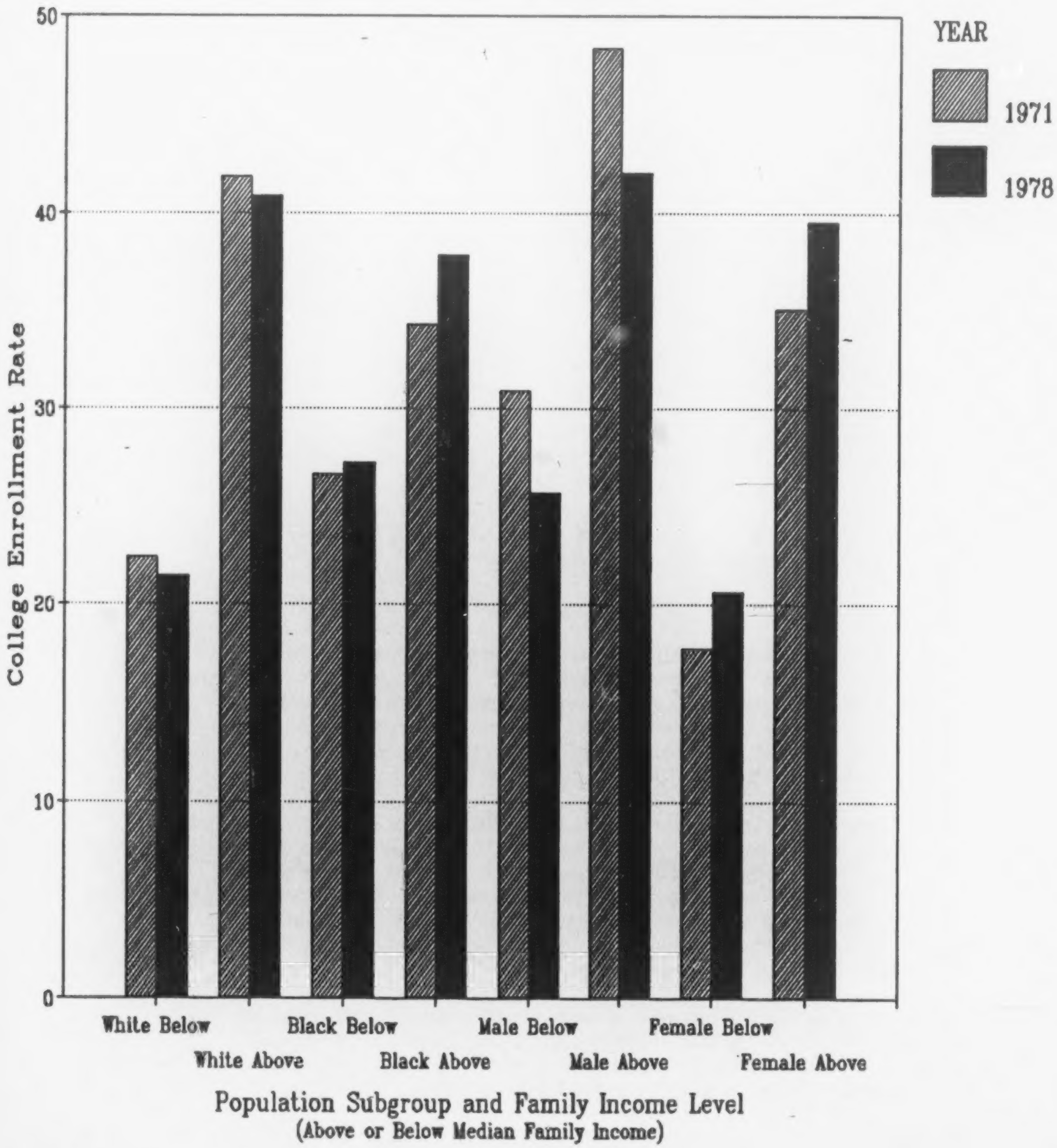
Hansen used CPS data from two points in time--1971 and 1978-to compare the college enrollment rates for dependents from families with dependents age 18 to 24. His control for family income was above and below the median at these two years. He calculated college enrollment rates for white, black, male, and female high school graduates. We have charted Hansen's findings in Figure 6.

Hansen concluded his analysis of his data as follows:

> **... the evidence assembled here suggests that the growth in federal financial aid programs and their targeting toward youth from lower income and lower status families, did not appear to alter to any appreciable degree the college enrollment expectations of high school seniors or in the composition of postsecondary education students over the 1970s. (p. 46)**
>
> **... we are left with a new set of questions that must be pursued before we can be satisfied that we understand what happened and why it happened. We must still start with the failure to observe more pronounced changes in enrollment patterns that would be consistent with the increased provision of student financial aid. As noted earlier, this came as a surprise to me and to many other observers of the program. To the extent that these expectations have not been fulfilled, and assuming that there is no other explanation for the absence of changes, we are forced to conclude that student financial aid simply operates as a transfer program, that by substituting of public for private funds it reduces the financial burden on parent and students. (p. 47)**

FIGURE 6

COLLEGE ENROLLMENT RATES FOR DEPENDENT HIGH SCHOOL GRADUATES AGE 18 TO 24 BY RACE, GENDER, AND FAMILY INCOME 1971 AND 1978



Source: Hansen, 1982.

In a review of Hansen's analysis, Breneman identified several additional approaches to the analysis of available data that could have illuminated the puzzling findings further. Among Breneman's comments was the suggestion that dividing the population into halves above and below the median provided too gross a measure, "obscuring shifts in enrollment rates within each group." Breneman noted that Hansen's time series began with 1971, when the military draft during the Vietnam War distorted college enrollment behaviors, especially for whites males. He suggested either using an earlier base year or controlling in some other fashion for the war/draft effects on enrollments. Breneman noted that nobody knew much at all about the composition of student aid packages and what the effects of different packages (loans versus grants, for example) might be. He pointed out that the real purchasing power of the Pell Grant declined significantly over the period of study, and that Veteran's programs shrank. (Breneman, 1982)

Others have examined and commented on Hansen's analysis, findings, and conclusions. The ACT study reported in this paper is another response to Hansen's study. The ACT study addresses many of the concerns raised by Breneman, and in so doing produces somewhat different findings and conclusions.

The Davis-Johns study. Another approach to the study of college enrollment from different family income backgrounds was developed by Davis and Johns in the early 1980s, and updated in 1988. Their approach combined college freshmen enrollment data from the National College Freshmen Norms report series, with Current Population Survey data on incomes of families headed by parents that could have college age children. Davis and Johns calculated college enrollment rates by family income levels from these data sources for 1966, 1971, 1976, 1981, and 1986.

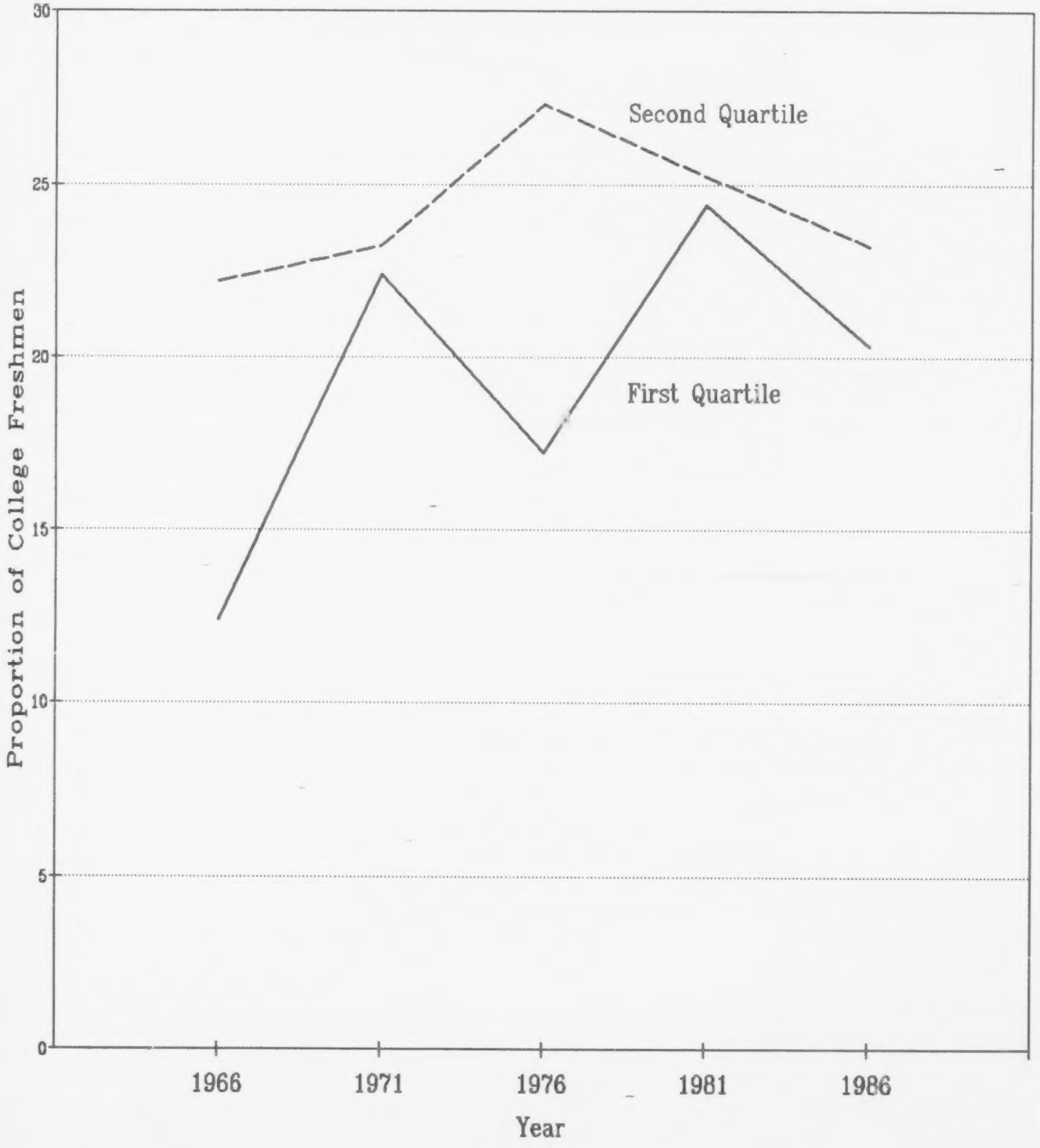
The results of the Davis-Johns analysis are summarized in Figure 7. Shown are the percentages of college freshmen below the family income levels defining the upper limits of the first and second quartiles. What they show must be described by quartiles. The proportion of college freshmen from the first or bottom quartile of the family income distribution increased from 12.4 percent in 1966 to 22.4 percent by 1971 (when Hansen began his analysis). It then decreased to 17.2 percent in 1976, and increased to a peak of 24.4 percent in 1981 (three years after Hansen's time-series concluded). By 1986 the proportion had dropped to 20.3 percent.

The growth and decline of the proportion of college freshmen from the second quartile of the family income distribution is less dramatic than that of the first quartile. The second quartile proportion increased from 22.2 percent in 1966, to a peak of 27.3 percent in 1976, and then dropped back to 23.2 percent by 1986.

The Davis-Johns analysis makes several improvements over the Hansen analysis as suggested by Breneman. First, the study breaks down the group below median family income into quartiles, with different results as Breneman suggested might be the case. Second, the Davis-Johns analysis begins five years earlier than Hansen's time-series, and again the results are more dramatic and informative than Hansen's. But the enhancements only partially develop the full picture of college enrollment behaviors for freshmen from low family income backgrounds.

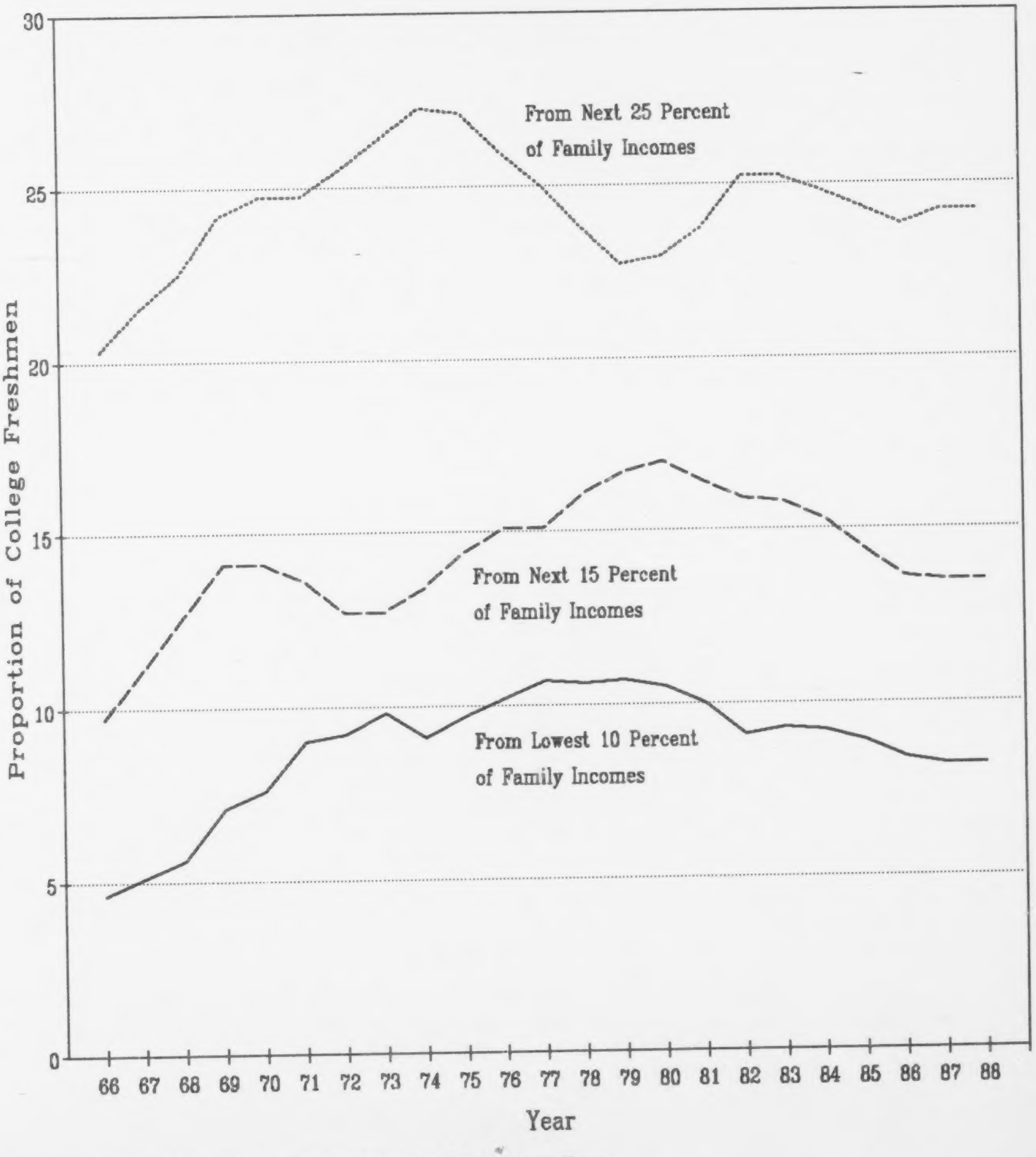
Mortenson (1989) extended and refined the Davis-Johns analysis by calculating enrollment proportions for the bottom decile and next fifteen percent of the lower income quartile, calculated the enrollment proportions for each year between 1966 and 1988, and made several additional adjustments. The result of Mortenson's reanalysis is presented in Figure 8.

FIGURE 7
PROPORTION OF COLLEGE FRESHMEN FROM FIRST AND SECOND QUARTILES OF FAMILY INCOME 1966, 1971, 1976, 1981, AND 1986



Source: Davis and Johns, 1988.

FIGURE 8
PROPORTIONAL REPRESENTATION OF COLLEGE FRESHMEN FROM DIFFERENT FAMILY INCOME RANGES
1966 TO 1988



Sources: Current Population Reports P-60 and National College Freshmen Norms

In this chart, a decidedly different picture of college enrollment rates for freshmen from the bottom half of the family income distribution emerges compared to Hansen's picture shown in Figure 6. First and most notably, the proportional representation of freshmen from the lowest 10 percent, next 15 percent, and second quartile of family incomes increased most sharply between 1966 and 1971, or before Hansen's time series began. Second, the patterns differ between income levels. Third, the experience of the bottom quartile during the 1980s has been entirely negative. Following peaks reached during the late 1970s, the proportions of college freshmen from the lowest decile and next 15 percent of the family income distribution declined throughout the 1980s.

The Davis-Johns study and Mortenson's subsequent extension suffer from one problem that Hansen's study avoids. By combining data from two different sources, collected under different sampling procedures, using differing definitions, and lacking important controls such as high school graduation and families with children, Davis and Johns analyze data built on many soft assumptions.

A thesis of the study reported in this paper is that the data used by Hansen--which lack the above problems--can be used to reach a conclusion that supports the finding of Davis and Johns and refutes Hansen's earlier findings. This thesis is based on the marvelous advantage of an additional decade of data with which to clarify hindsight, as well as employing Breneman's original criticism regarding disaggregation of the bottom half of the family income distribution. The next section describes our reanalysis of the data set first used by Hansen in 1982.

Study Design

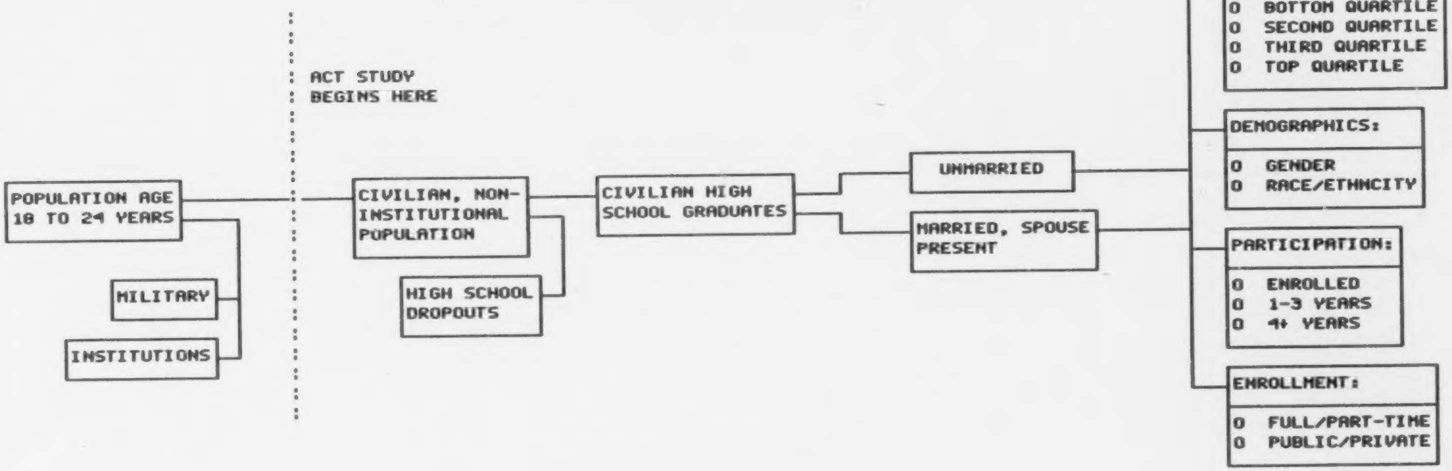
The intent of the study was to examine high school graduation and college participation rates for students from different levels of family income. The examination of these rates was to be descriptive, comparative, and exhaustive. Enrollment rates were to be calculated over a long period of time--several decades minimum-and these rates were then to be compared within family income levels over time, across family income levels at any point in time, and across family income levels over the time period of the available data. Data were organized to reflect these objectives.

Data: The data used were taken from the published reports of the Census Bureau's Current Population Survey. These reports are published in the P-20 series of Current Population Reports, and bear the general title: "School Enrollment-Social and Economic Characteristics of Students: October 19XX." All data used in this study were derived (as explained below) from the table on "Enrollment Status for Primary Family Members 18 to 24 Years Old by Family Income, Control of School, Marital Status, Sex, Race, and Hispanic Origin."

These data describe the high school graduation and higher educational enrollment of the civilian, noninstitutional population of the United States based on annual sampling of this population in October of each year. Populations excluded from this sampling and report include people enrolled in military service or held in correctional institutions.

Analysis: The design of the analysis sequence is shown in Figure 9. This permits us to develop the Census data in ways that shed light on public policy problems of preparation for and participation in American higher education by young adults from different family income backgrounds.

FIGURE 9
HIGH SCHOOL GRADUATION AND COLLEGE PARTICIPATION
OF 18 TO 24 YEAR OLDS BY FAMILY INCOME LEVELS
1970 TO 1989


ACT STUDY
BEGINS HERE
POPULATION AGE
18 TO 24 YEARS
MILITARY
INSTITUTIONS
CIVILIAN, NON-
INSTITUTIONAL
POPULATION
HIGH SCHOOL
DROPOUTS
CIVILIAN HIGH
SCHOOL GRADUATES
UNMARRIED
MARRIED, SPOUSE
PRESENT
FAMILY INCOME:
O BOTTOM QUARTILE
O SECOND QUARTILE
O THIRD QUARTILE
O TOP QUARTILE
DEMOGRAPHICS:
O GENDER
O RACE/ETHNCITY
PARTICIPATION:
O ENROLLED
O 1-3 YEARS
O 4+ YEARS
ENROLLMENT:
O FULL/PART-TIME
O PUBLIC/PRIVATE

The Census Bureau's published data both permitted and required us to analyze data in several ways that helped illuminate the high school graduation and college enrollment behaviors that were the focus of the study. The first of these analyses required us to examine marriage among 18 to 24 year olds because the key family income control in our study would mean one thing for those living at home with their parents and quite another for those who had married and thereby created new families.

The second analysis required us to limit our study of college enrollment behavior to those who had graduated from high school and were thereby qualified to enroll in college somewhere. Thus, we were able to calculate high school graduation rates by family income level for those who were married and those who were not married. We devoted a section of this paper to describing these findings in some detail.

Once our base population was defined as limited to high school graduates who were either unmarried or married, we calculated family income quartiles for the unmarried and married populations separately for each year of our study, 1970 to 1989. The income boundaries for each marital status remain fixed in our study for each subpopulation group studied--males, females, whites, blacks, and Hispanics--which in turn enabled us to examine shifts in the composition of each quartile by subgroup over the twenty year period of the study.

As an alternative to the quartile breakdowns, we could have used constant dollar definitions of intervals in this study. We did not do so because we wanted to focus on Hansen's 1982 findings. However, for one reason this is an important question. Over the time span of this study--1970 to 1989--there has been a substantial redistribution of family income in the United States. There are now more poor families and rich families, and therefore fewer middle income families, than there were in 1970. This affects the interpretation of the findings in ways that will be addressed later in this paper. For now, it is important to note that some portion of the observed shifts in higher educational participation rates by young adults from different family income backgrounds that are reported in this paper are attributable to the bottom quartile being poorer in 1989 than it was in 1970, and the top quartile being richer in 1989 than it was in 1970.

Once family income quartiles were defined for the unmarried and married populations of high school graduates, we proceeded directly to the analyses of high school graduation and college participation behaviors. First, we analyzed college participation rates for all unmarried high school graduates age 18 to 24, then within each group for males, females, whites, blacks, and Hispanics. Second, we disaggregated college participation into its three components: currently enrolled in college, not enrolled but having completed one to three years of college, and not enrolled but having completed four years or more of college. Third, we examined two forms of enrollment for those currently enrolled in college: full-time compared to part-time study, and enrollment in a public or private college. All of these studies controlled for family income.

We present our findings regarding the high school graduation and college participation of married high school graduates age 18 to 24 in the Appendix of this paper. For married young adults, family income refers to their own income and not the family income background that they carried through elementary and secondary education and prior to marriage. Their own income is in turn largely a function of their own educational attainment. Among married high school graduates, those who have four years or more of college are both older than most 18 to 24 year olds, and in fact have higher incomes because of their own educational attainments. This is an issue quite separate from parental income and its relationship to educational opportunity. We have presented our analysis in tabular form in the Appendix tables for those who might wish to examine this question further.

Nearly all of the data developed in this study are contained in the 39 tables of the Appendix. The text highlights the major findings in narrative and charts. The serious student is invited to examine directly the data in the Appendix tables.

A Comment

People from different family income backgrounds differ in many ways beyond income that are important to the study of educational attainment. This study skips over these very important differences to focus on the bottom-line performance of federal programs designed to assist students from low family income backgrounds. While our study does not attempt to relate these differences to educational attainment, one should not ignore the roles such differences play in influencing educational outcomes. In fact, we think it likely that failure to focus remedial efforts on these specific problems of children from low income families contributes to the lack of apparent results achieved by programs to help such children that have been in place for the last twenty five years.

For example, less than half of the high school seniors who take the ACT Assessment for college admission have completed a college preparatory curriculum in high school. These are students who, by taking the ACT Assessment, signal not only their intent to go on to college after high school but their intent to attend a selective admissions college likely to offer the most challenging academic experience. For the 1989 high school class, 54 percent of those who took the ACT Assessment had not completed a high school curriculum that ACT research has shown to be important to maximizing one's chances for success in college.

More central to our concern for students from low family income backgrounds, the 1989 ACT data show that 66 percent of the high school graduates who came from family incomes of less than $6000 per year had not completed the college preparatory curriculum in high school, compared to 44 percent of those from families with incomes greater than $60,000 per year. Clearly, those from very low family income backgrounds are less well academically prepared to undertake and succeed in college than are those from the highest family income backgrounds. Moreover, the gap in preparation for college between high school seniors from very low and very high family income backgrounds has widened during the last two years.

Public policy designed to enhance educational opportunities for students from low family income backgrounds must consider differences such as these beyond family income if the differences in educational attainment are to be effectively addressed. Although this study does not address such differences, informed public policy making should consider such factors in the design of programs to carry out public policy objectives.

II. Marriage and High School Graduation

This section describes patterns and trends in marriage and high school graduation among 18 to 24 year olds. We are interested in marriage because we want to know to whose family the reported family income refers--the parent's or the student's. And we are interested in high school graduation because it is a prerequisite for college admission, which in turn is a prerequisite for a bachelor's degree and access to life's rewards that follow from higher education.

Marriage

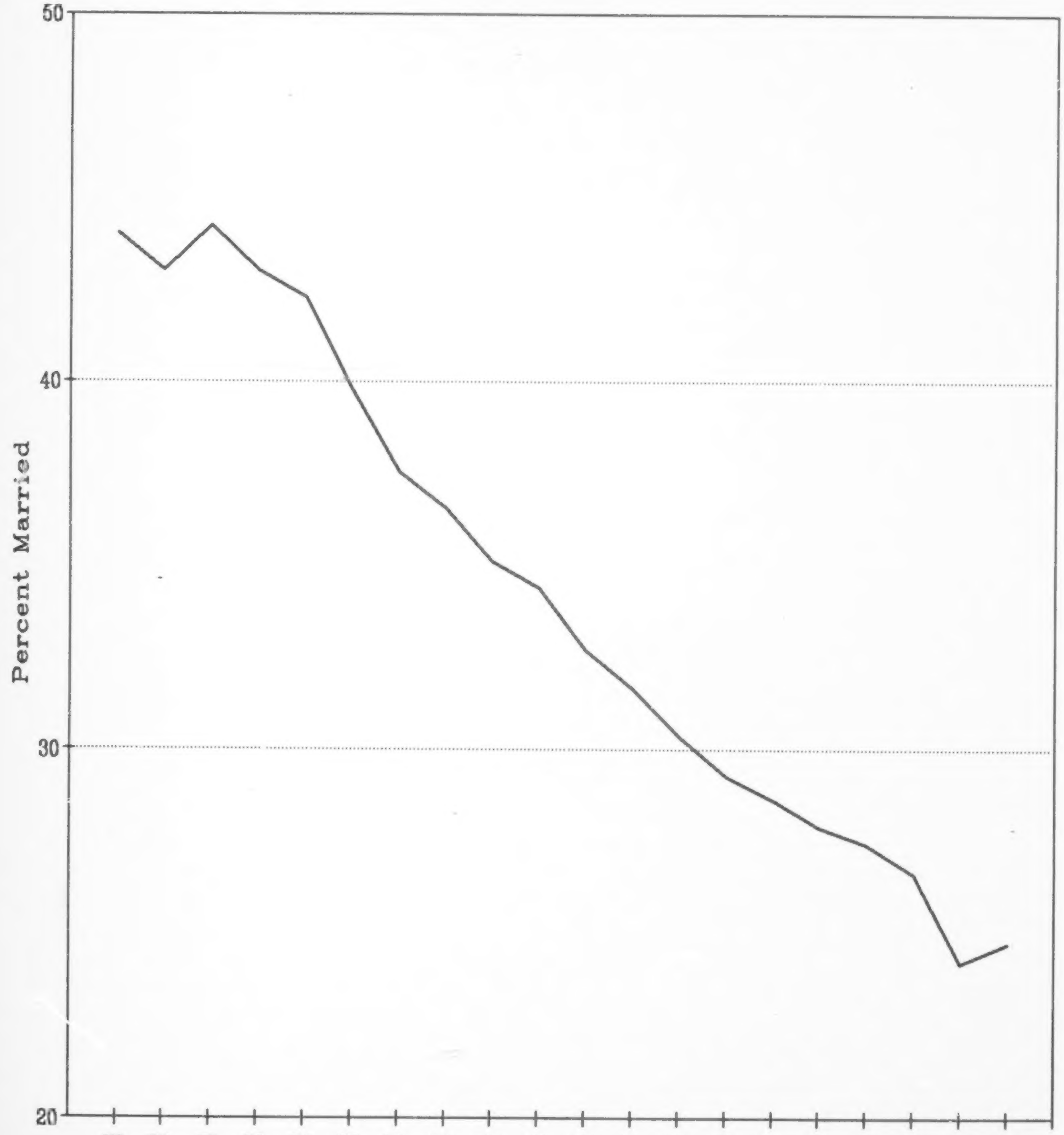
The proportion of the 18 to 24 year old population that is married has dropped sharply, from 44 percent in 1970 to 25 percent by 1989. Although the population of 18 to 24 year olds was similar in 1970 (20.6 million) and 1989 (20.5 million), the number that were married dropped from 9.1 million to 5.1 million. The proportion married is shown in Figure 10. Figures 11 and 12 show the marriage rate over the last two decades among young adults by gender and race/ethnicity, respectively. Males are less likely than females, and blacks less likely than either whites or Hispanics, to be married. For each population group, however, marriage rates have declined sharply during the last two decades.

By 1989 only one out of four 18 to 24 year olds was married with spouse present. The family incomes for this group are the earnings of the 18 to 24 year old plus their spouse, not their parents. As a result, median family income is lower for this group ($22,430 in 1989) than unmarried persons ($35,447 in 1989); in most cases, parental income is the basis of family income.

The decline in the proportion of 18 to 24 year olds that are married and living with their spouse introduces a variable of unknown significance into this study. Our focus will be on trends and patterns in the educational attainment of 18 to 24 years olds grouped by quartiles of family income. But if the decline in marriage rates is produced disproportionately from one portion of the family income range, then some portion of the observed trends and patterns in educational attainment may be due to trends and patterns in marriage separate from high school graduation and college participation behaviors. Unfortunately, our data do not permit us to isolate the changing marriage behaviors of 18 to 24 year olds from the enrollment behaviors that are our central concern.

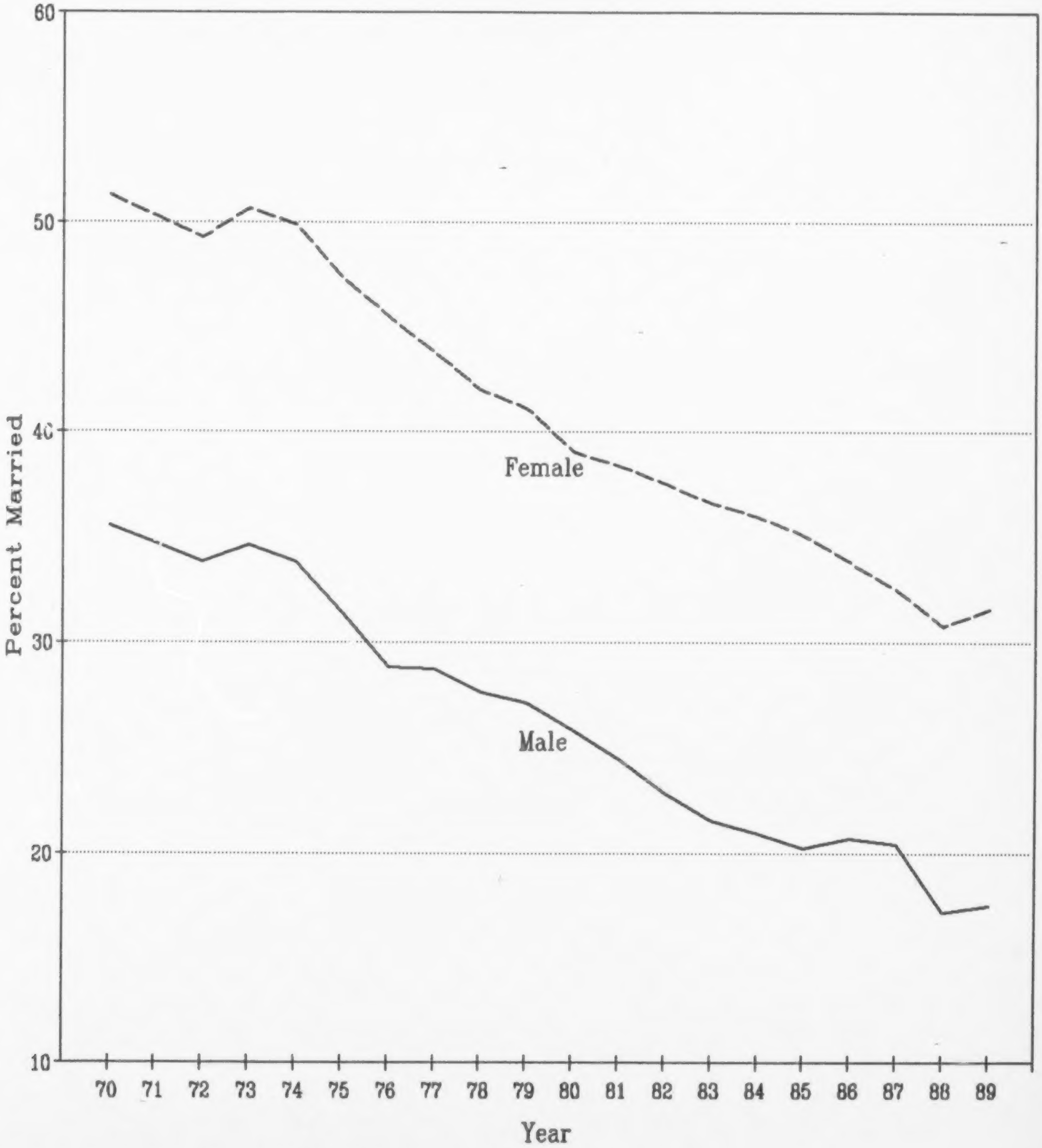
In this paper we refer to those who are not "married, spouse present" as unmarried. Generally, but not always, these are dependent children living with their parents. The unmarried group includes a small number of young adults who are not "dependent family members." The Census Bureau did not begin publishing such data until 1987. In the data for 1987, 1988, and 1989, about 6 percent of those who are labeled "unmarried" are not "dependent family members" but are "other marital and family status." About three-fourths of this group is female. For consistency over the twenty year period of this study, we have added the data on "dependent family members" and "other marital and family status" together for the last three years. The unmarried data for 1970 through 1989 are therefore defined consistently, although the proportion of "other marital and family status" that is "dependent family members" is known only for 1987 through 1989.

FIGURE 10
MARRIED PROPORTION OF POPULATION AGE 18 TO 24 YEARS OLD
1970 TO 1989



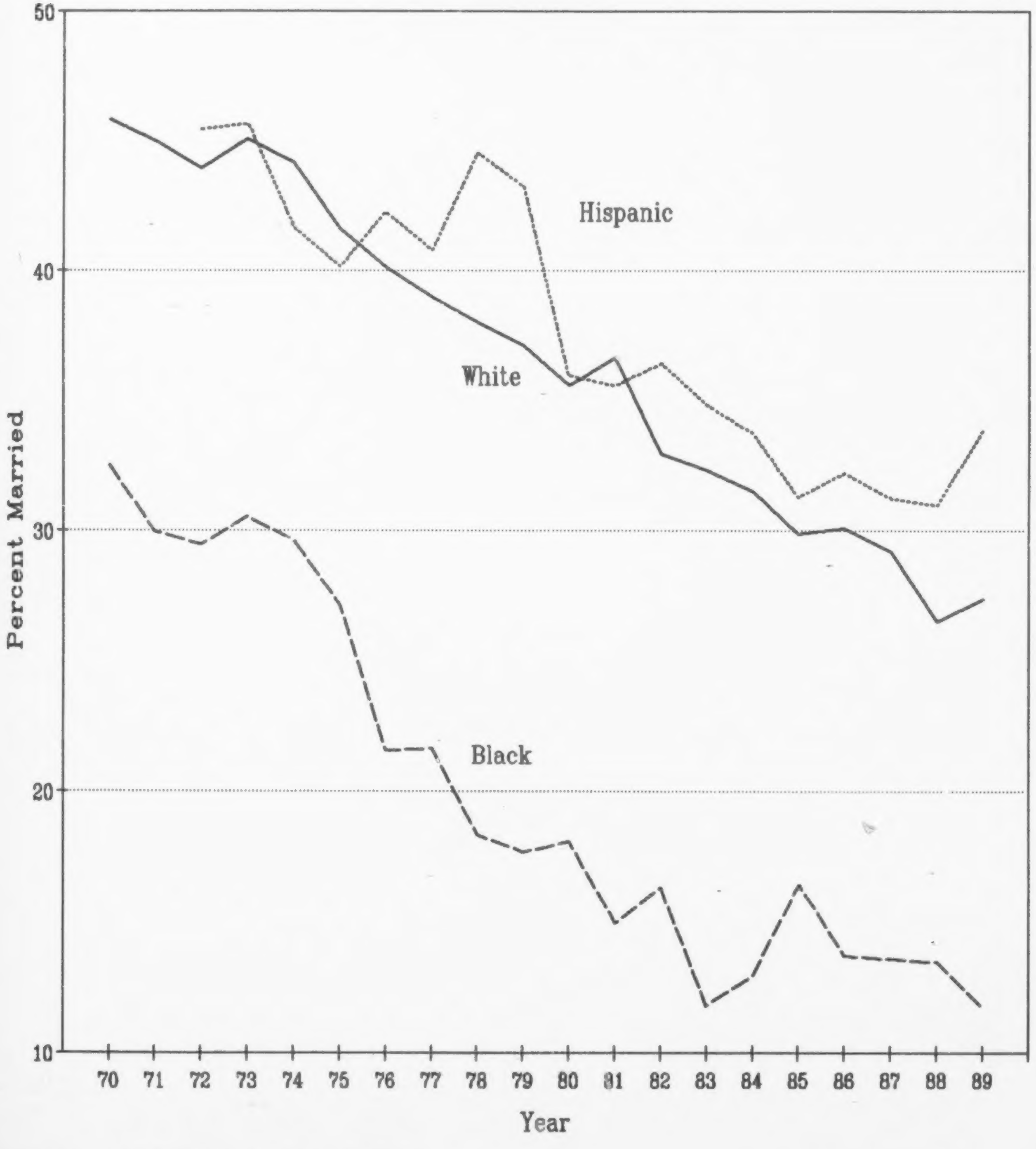
Source: Current Population Reports, Series P-20, annual.

FIGURE 11
MARRIED PROPORTION OF POPULATION AGE 18 TO 24 YEARS OLD BY GENDER 1970 TO 1989



Source: Current Population Reports, Series P-20, annual.

FIGURE 12
MARRIED PROPORTION OF POPULATION AGE 18 TO 24 YEARS OLD BY RACE\ETHNICITY 1970 TO 1989



Source: Current Population Reports, Series P-20, annual.

The small group of divorced, separated, and widowed who fall under "other marital and family status" could affect the data developed for this study and reported in this paper in several ways. First, because these are largely female headed families, they are likely to be very low income. To the extent their share of the unmarried group has increased over the last twenty years, they could be pulling the lowest quartile income limit downward over time. We have no data to address this question other than for 1987 through 1989, but its potential for distorting our data cannot be dismissed.

Second, despite the progress made by women generally in both high school graduation and college participation since 1970, young women from these very low income families are not obvious candidates for college. To the extent they have become a larger share of the low family income quartile over the last 20 years, some portion of the problem of college participation from the bottom quartile could be attributed to this fact alone. But because we have no data on this group prior to 1987, the effect of this subgroup on the data for all unmarried cannot be described.

High School Graduation for the Unmarried

A prerequisite for admission to college is high school graduation. Having now disaggregated the population into unmarried and married 18 to 24 year olds, we will examine the high school graduation experience for the unmarried population. Further, knowing to which family unit family income refers, we can examine high school graduation rates from different family income backgrounds of the unmarried population.

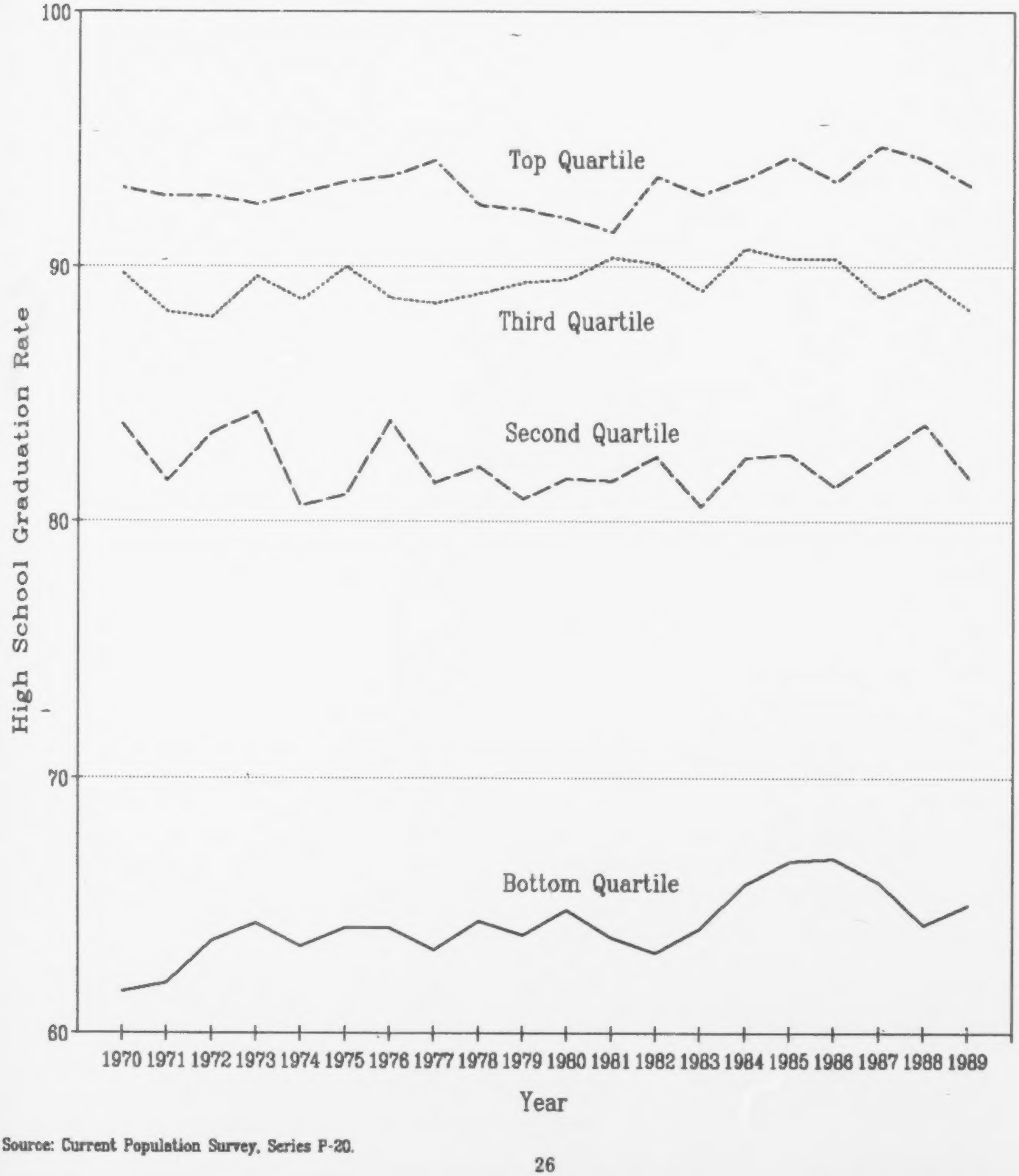
Between 1970 and 1989, the proportion of 18 to 24 year olds that had graduated from high school increased, from 79.9 to 80.5 percent. During this 20 year period, the high school graduation rate fluctuated between a low of 79.2 percent in 1971 and a high of 82.0 percent in 1985.

The nearly insignificant improvement in high school graduation rates over this period stands in sharp contrast to the announced goals of national leadership to increase the nation's high school graduation rate to 90 percent by 1990. Secretary of Education Terrel Bell first announced this national goal in 1983. President Reagan announced the same goal in 1984. More recently, in January of 1990, President Bush announced the same goal, but pushed back the deadline for reaching it to 2000 (Olson, 1990). At the rate of improvement experienced over the last 20 years, instead of reaching the 90 percent goal by the year 2000 the goal will be reached by the year 2317.

High school graduation rates by quartiles of family income for unmarried high school graduates age 18 to 24 years are shown in Figure 13. In 1989, the highest family income quartile included incomes greater than $58,125. The third quartile of family income included incomes of between $35,447 and $58,125. By this measure, median family income for unmarried 18 to 24 year old high school graduates was $35,447 in 1989. The second quartile included incomes of between $20,017 and $35,447. The bottom quartile included family incomes of less than $20,017. See Table 18 in the Appendix for the family income quartile definitions for prior years.

The family income groups with high school graduation rates below 90 percent are apparent in Figure 13. They are the bottom two quartiles of the family income distribution, and especially the bottom quartile. This group had a high school graduation rate of about 65 percent in 1989. From the second quartile of family income, the high

FIGURE 13
HIGH SCHOOL GRADUATION RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED 18 TO 24 YEAR OLDS
1970 TO 1989



Source: Current Population Survey, Series P-20.

school graduation rate was about 82 percent in 1989. Above the median family income of unmarried high school graduates of $35,400, high school graduation rates are generally close to or above the 90 percent level, especially during the 1980s.

The high school graduation rate gap between the bottom and top quartiles of the family income distribution is shown in Figure 14. The gap is the difference between the high school graduation rates for the top and bottom quartiles of family income for each of the twenty years under study. This chart shows almost imperceptible reductions in high school graduation rate differences between 1970 and 1989. In fact, what is most striking about Figure 12 is that so little progress has been made to reduce this difference during a period when political leaders identified correction of the problem as a national goal.

Gender. High school graduation rates for unmarried 18 to 24 year old males are shown by family income quartiles in Figure 15. Overall, male high school graduation rates remained nearly unchanged between 1970 and 1989 at 78 percent of the population. The lack of change is apparent within each of the family income quartiles as well. Thus, the gap in the high school graduation rates between the bottom and top quartiles of family incomes for males remained largely unchanged during the last twenty years.

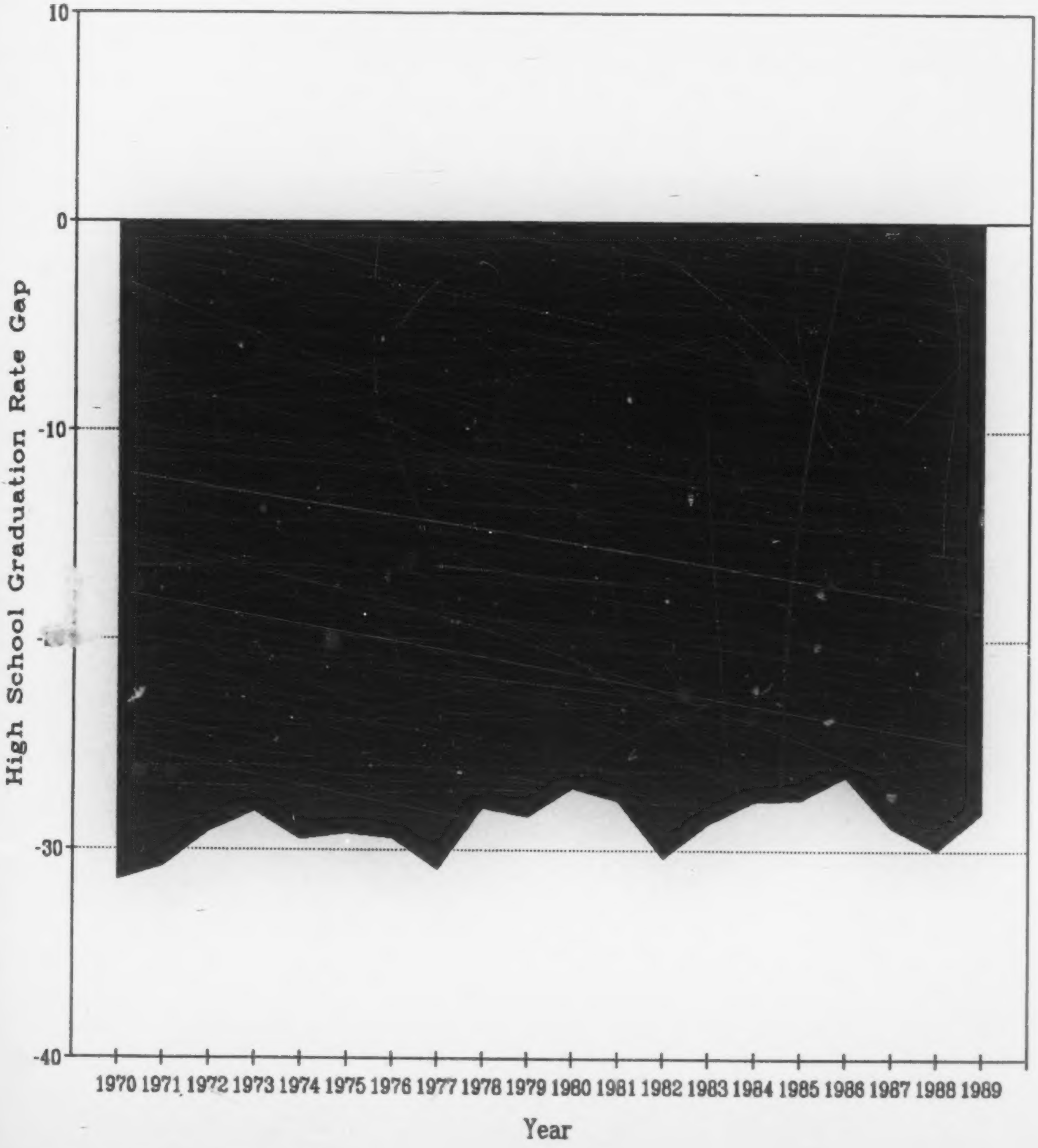
The high school graduation rates for unmarried 18 to 24 year old females increased slightly between 1970 and 1989, from about 82 to about 84 percent. As shown in Figure 17, this increase occurred primarily in the bottom quartile of family income, from 63 percent in 1970 to about 68 percent by 1989. In each of the higher family income quartiles, the high school graduation rate for women declined between 1970 and 1989. As a result of the increase in high school graduate rates in the bottom quartile and the slight decrease in the top quartile, the high school graduation rate gap for low family income females has closed over the last two decades, as shown in Figure 18.

Race/ethnicity. We have also examined high school graduation rates for unmarried 18 to 24 year old whites, blacks, and Hispanics. By deduction we have also examined high school graduation rates for those of "other race" than white or black, namely and mainly Asians.

White high school graduation rates overall were nearly 84 percent in 1989, or about the same as 1970. For each of the different family income quartiles, as shown in Figure 19, high school graduation rates have remained about flat during the last two decades. As a result, the high school graduation rate gap has remained about constant, as shown in Figure 20. In other words, there has been no progress in closing the gap for low income whites over the last two decades.

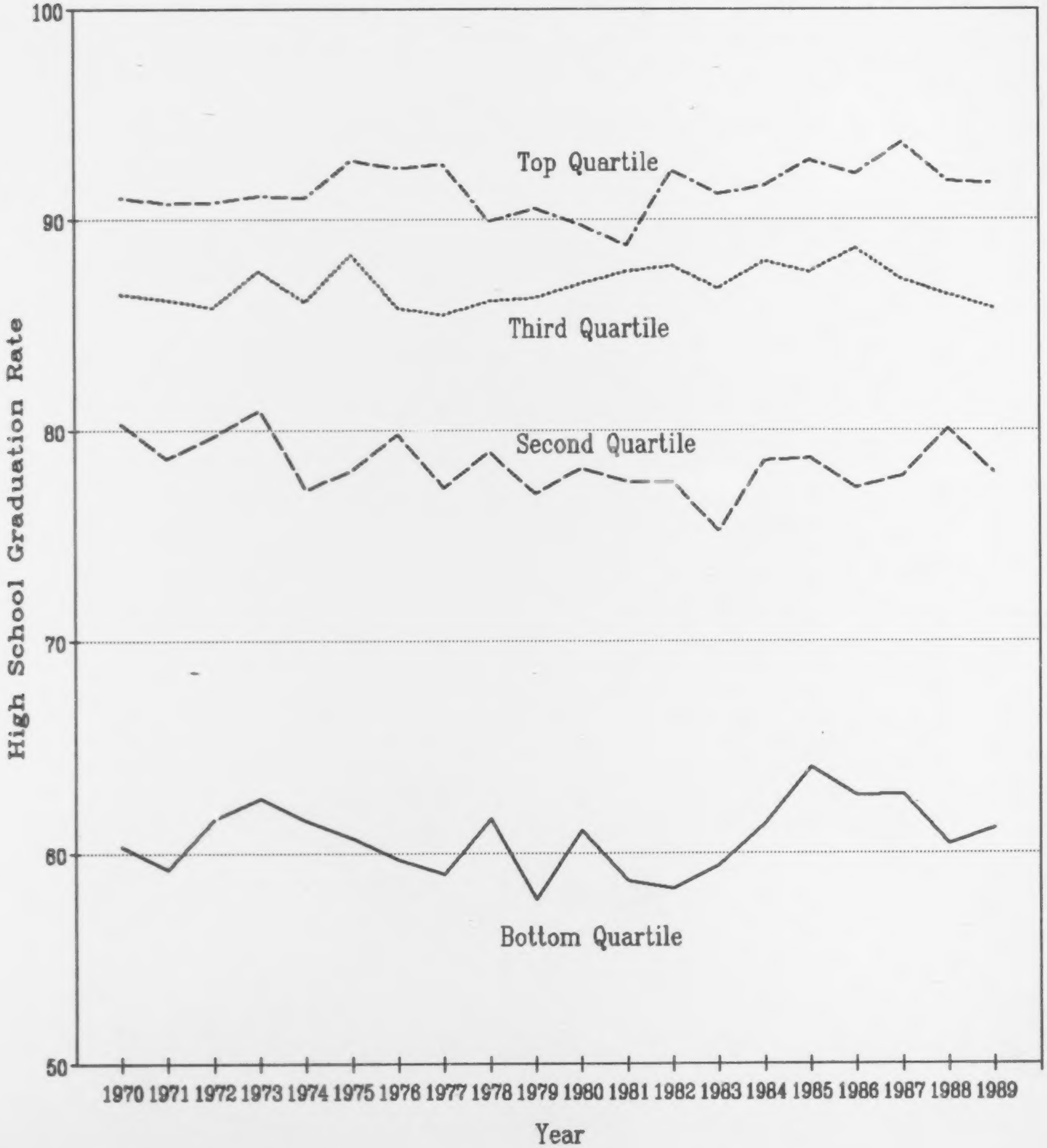
Black high school graduation rates, unlike those for whites, have increased sharply during the last two decades from 58 percent in 1970 to nearly 73 percent by 1989. This increase has occurred in each of the four family income quartiles, although at different times for different family income groups, as shown in Figure 21. In the top two quartiles, the increase in high school graduation rates occurred between 1970 and 1975, and the rates have remained stable or declined slightly since then. In the bottom two quartiles, the increase in rates has been more gradual and persistent over the last twenty years. By 1989 high school graduation rates from the bottom two quartiles of family income were close to record highs for the last twenty years. As a result of these differing patterns, the high school graduation rate gap for the bottom family income quartile students has closed somewhat over the last 15 years. This is shown in Figure 22.

FIGURE 14
HIGH SCHOOL GRADUATION RATE GAP FOR BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED 18 TO 24 YEAR OLDS
1970 TO 1989



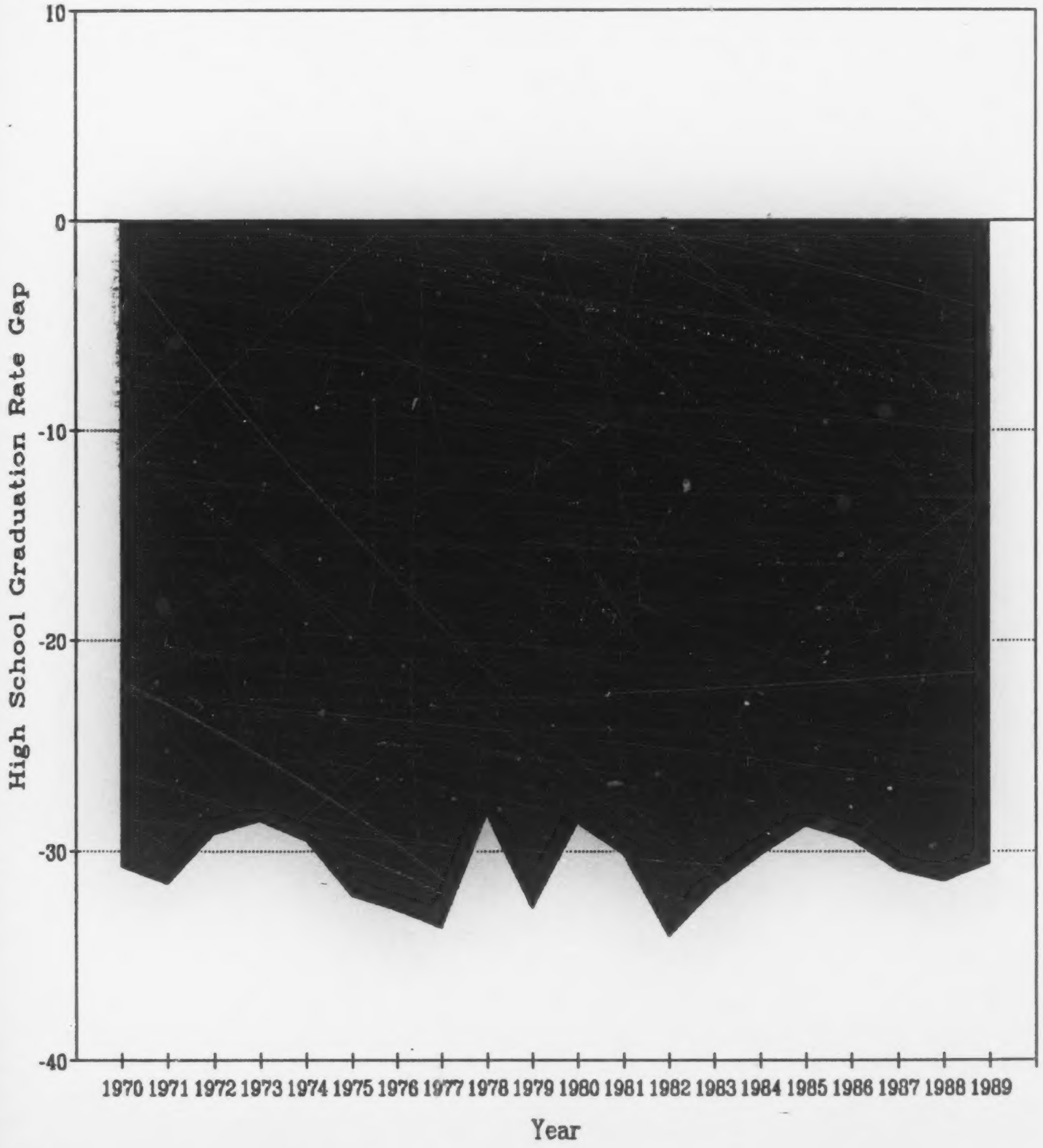
Source: Current Population Survey, Series P-20.

FIGURE 15
HIGH SCHOOL GRADUATION RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED MALES 18 TO 24 YEARS 1970 TO 1989



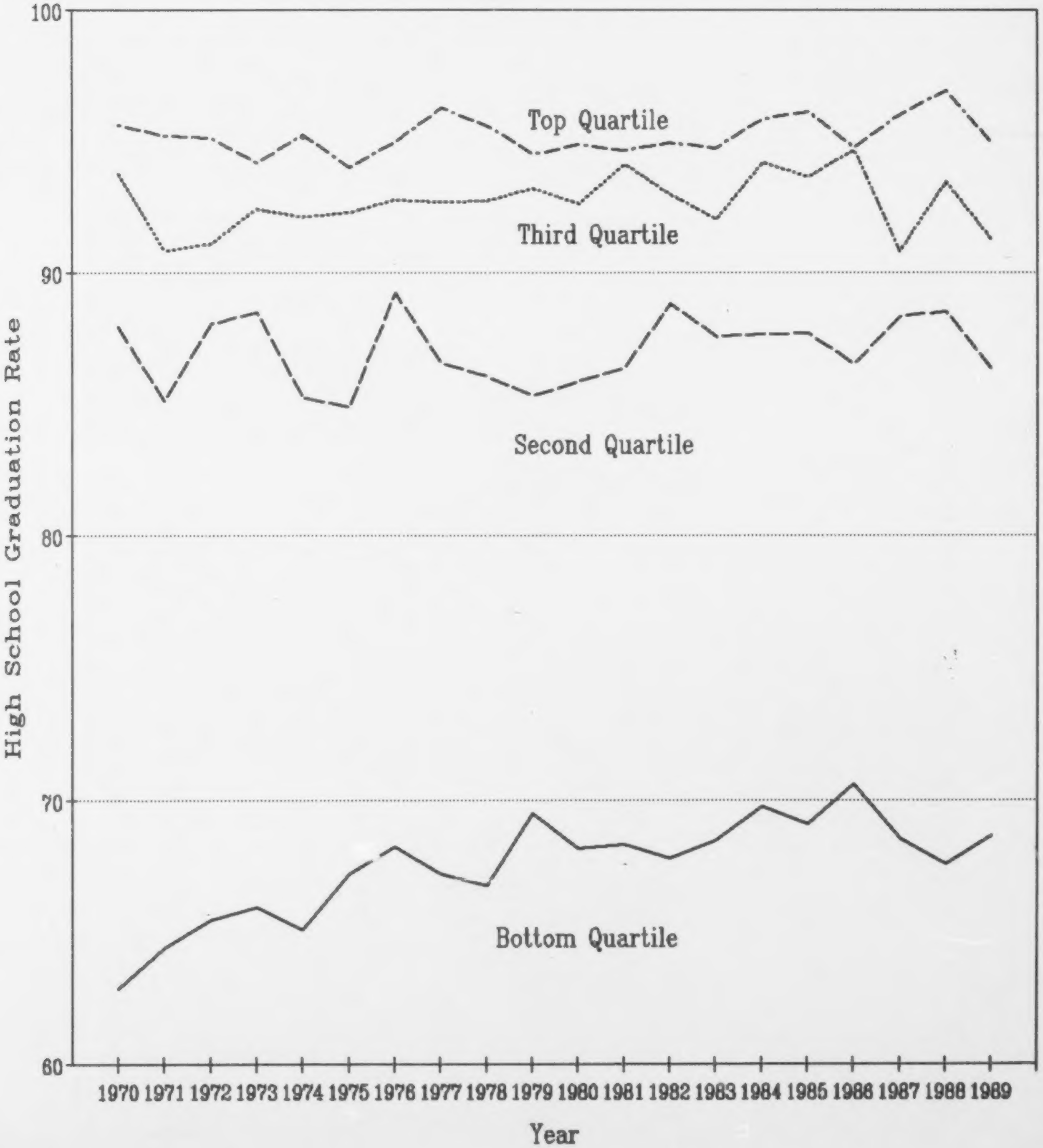
Source: Current Population Survey, Series P-20.

FIGURE 16
HIGH SCHOOL GRADUATION RATE GAP FOR BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED MALES 18 TO 24 YEARS
1970 TO 1989



Source: Current Population Survey, Series P-20.

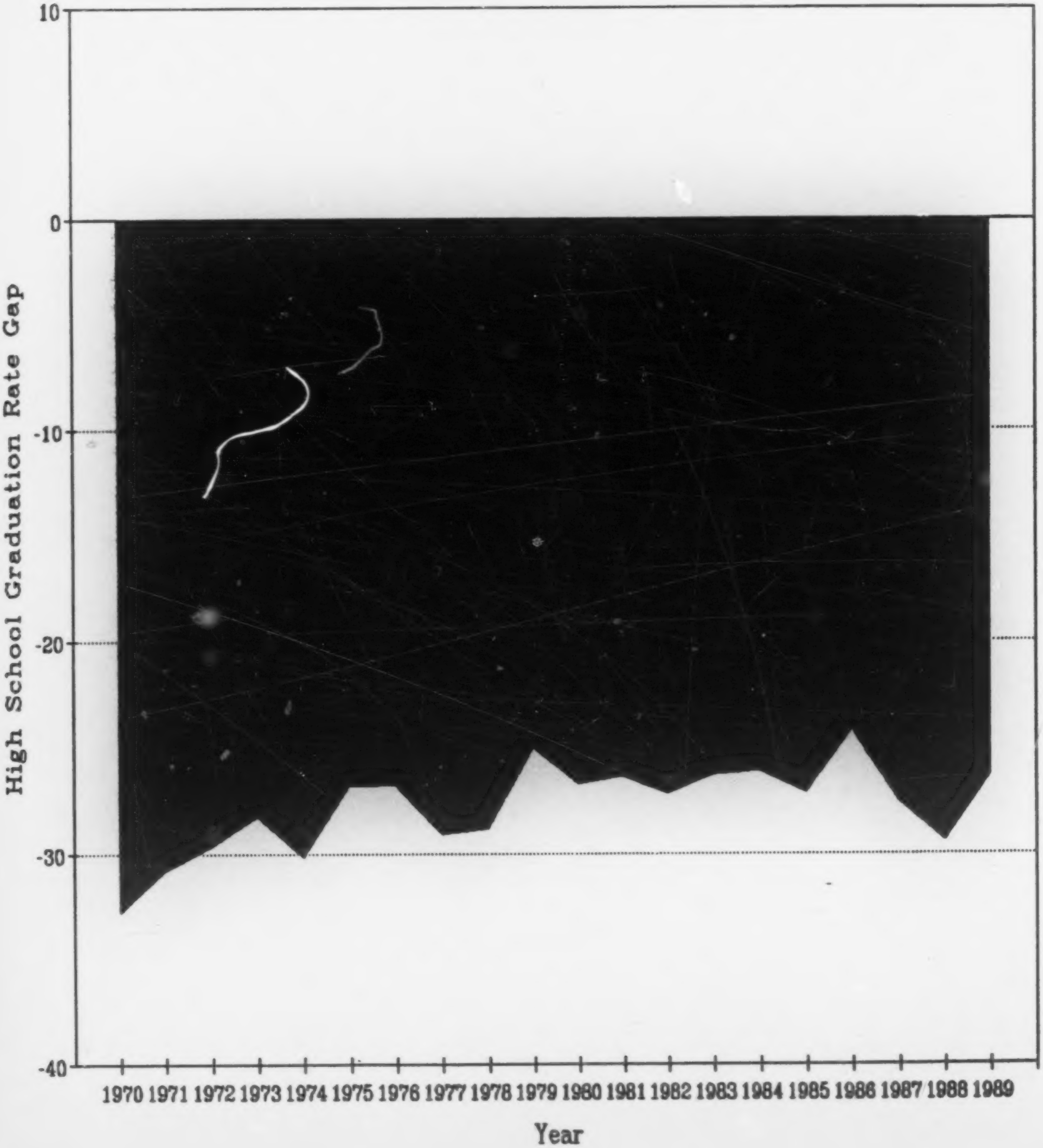
FIGURE 17
HIGH SCHOOL GRADUATION RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED FEMALES 18 TO 24 YEARS 1970 TO 1989



Source: Current Population Survey, Series P-20.

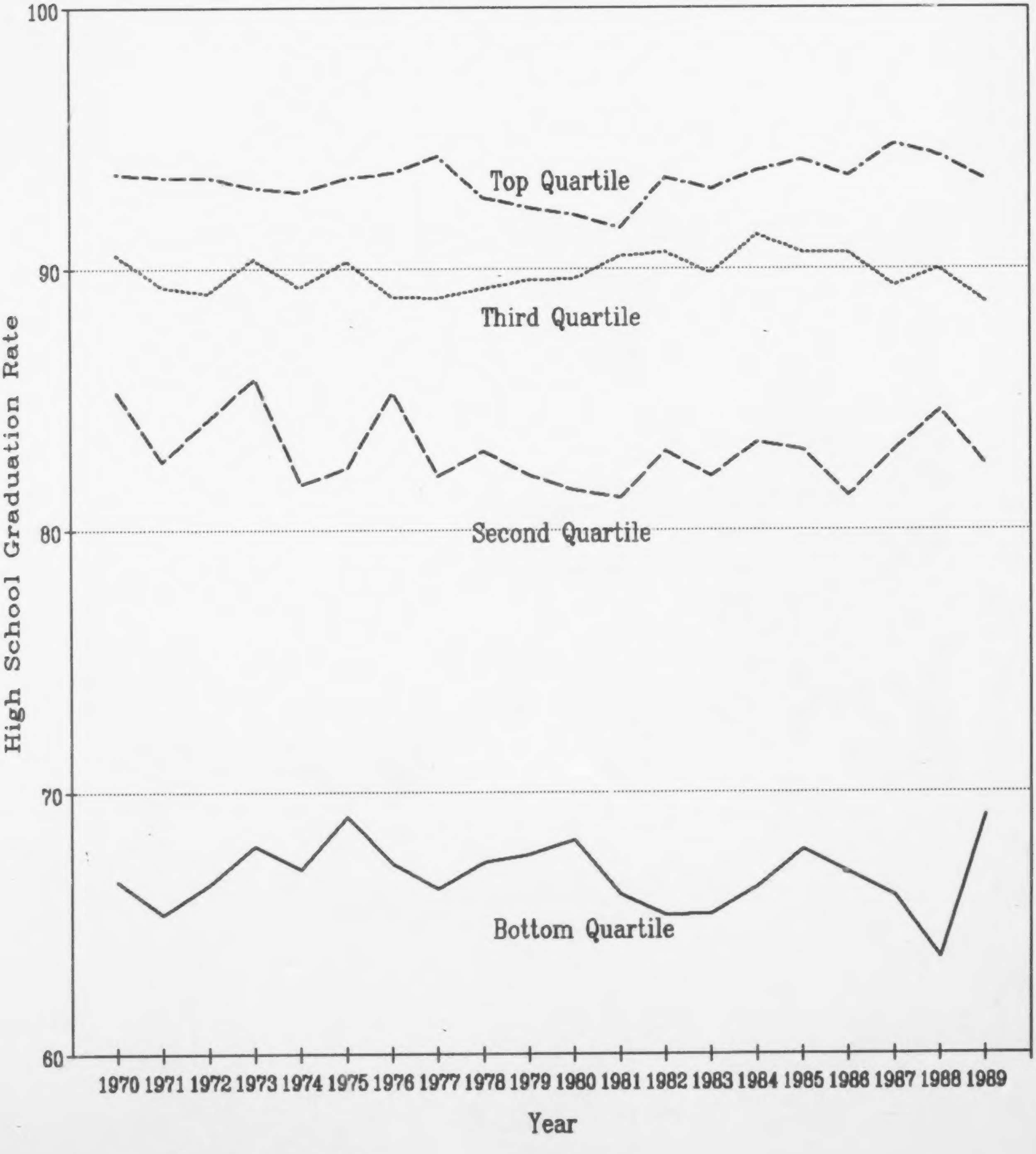
FIGURE 18

HIGH SCHOOL GRADUATION RATE GAP FOR BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED FEMALES 18 TO 24 YEARS 1970 TO 1989



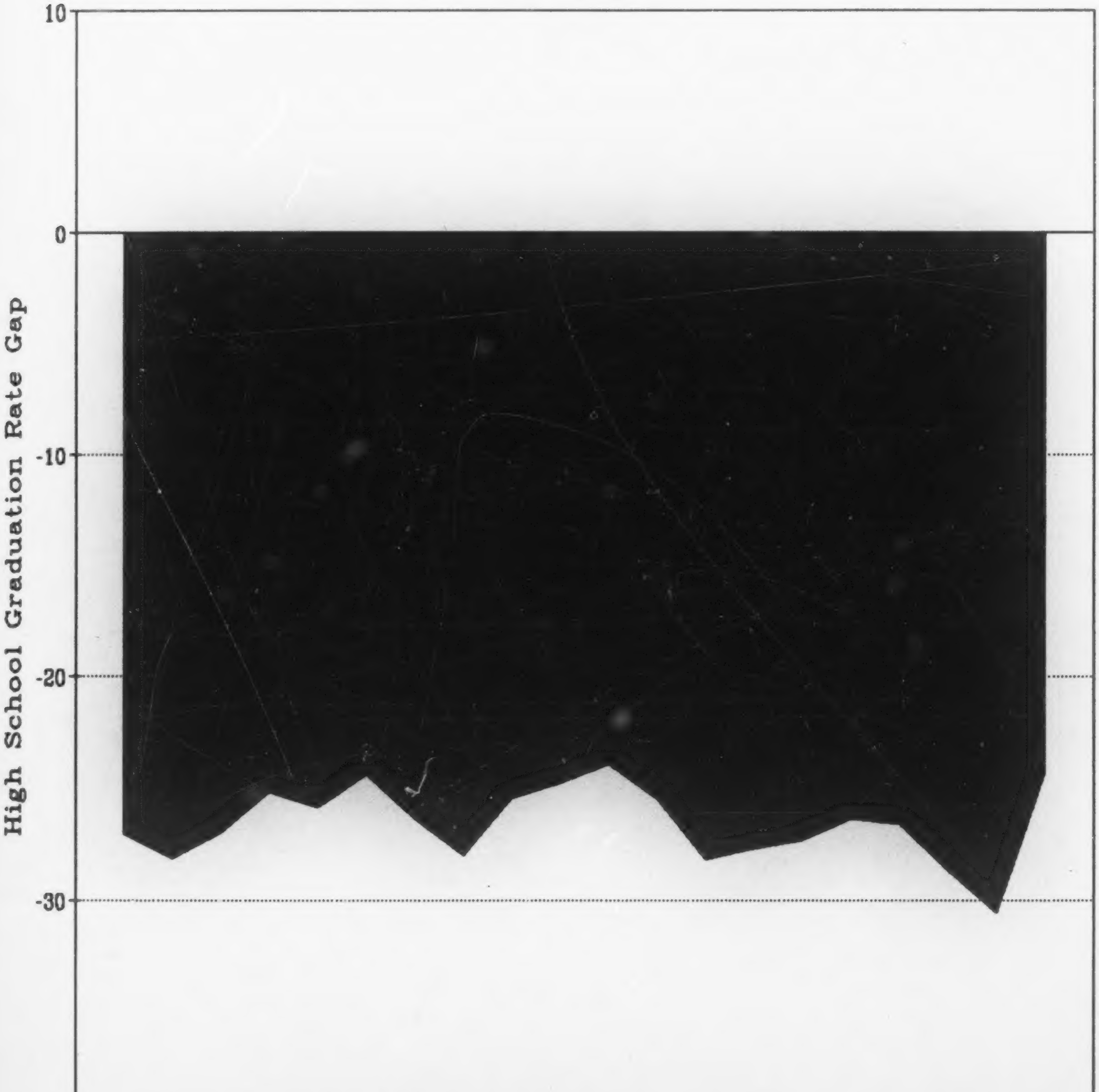
Source: Current Population Survey, Series P-20.

FIGURE 19
HIGH SCHOOL GRADUATION RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED WHITES 18 TO 24 YEARS
1970 TO 1989



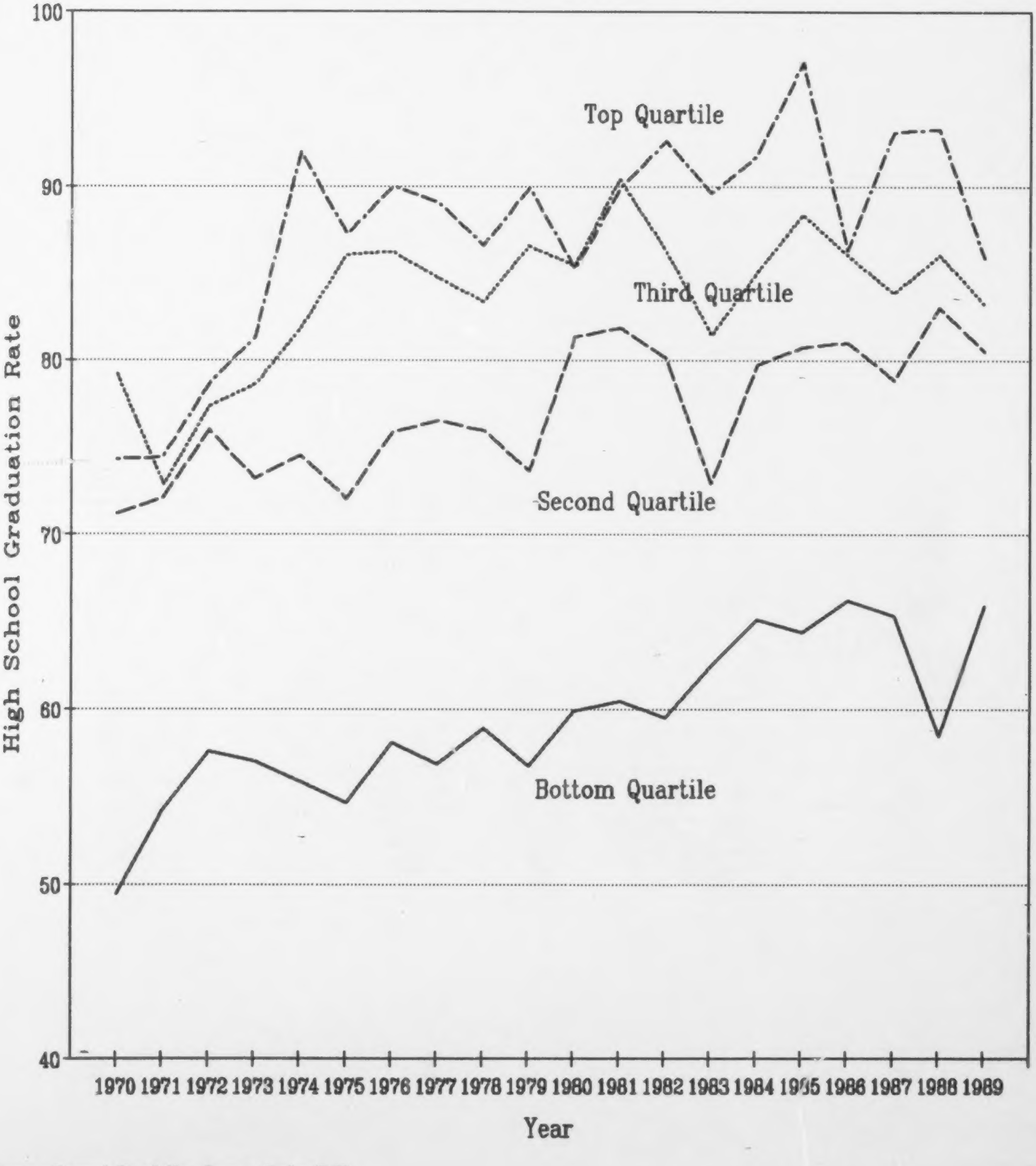
Source: Current Population Survey, Series P-20.

FIGURE 20
HIGH SCHOOL GRADUATION RATE GAP FOR BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED WHITES 18 TO 24 YEARS
1970 TO 1989



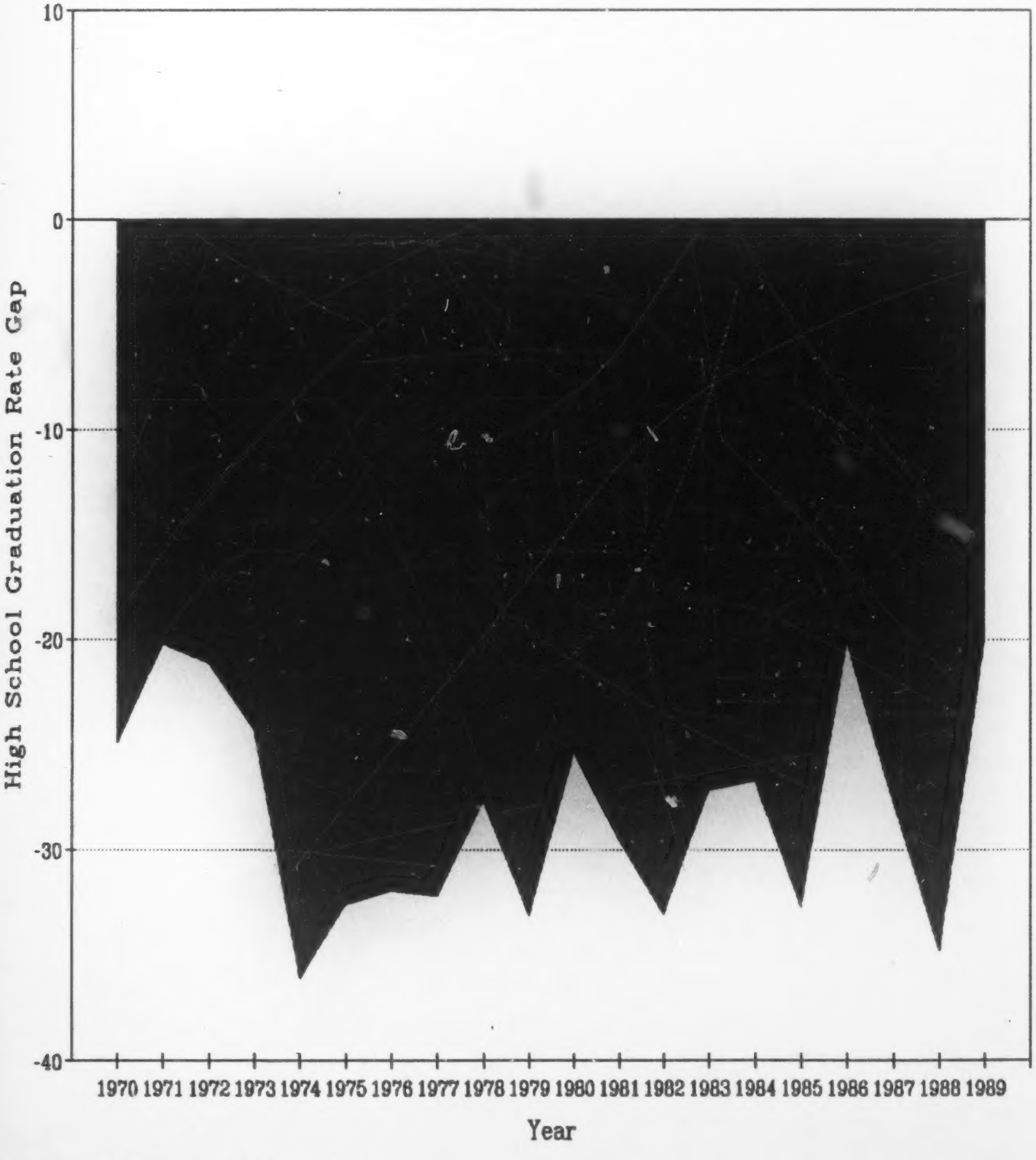
Source: Current Population Survey, Series P-20.

FIGURE 21
HIGH SCHOOL GRADUATION RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED BLACKS 18 TO 24 YEARS
1970 TO 1989



Source: Current Population Survey, Series P-20.

FIGURE 22
HIGH SCHOOL GRADUATION RATE GAP FOR BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED BLACKS 18 TO 24 YEARS
1970 TO 1989



Source: Current Population Survey, Series P-20.

Hispanic high school graduation rates are lower than for any other demographic group. In 1989, the proportion of unmarried 18 to 24 year old Hispanics who were high school graduates was 62 percent, compared to 73 percent for blacks and 84 percent for whites. However, overall Hispanic high school graduation rates have shown some improvement over the last eighteen years. Figure 23 shows Hispanic high school graduation rates by family income quartiles. Especially in the second and third quartiles, high school graduation rates have increased over the last eighteen years. In the top and bottom quartiles, however, graduation rates have dropped off in the last few years. This may be a result of statistical noise present in the sampled data, particularly in the top quartile where Hispanic numbers are relatively small. Figure 24 suggests that there has been no apparent improvement in the high school graduation rates for Hispanics from the bottom family income quartile to those from the top quartile since the early 1970s.

We have calculated (but not charted) high school graduation rates for unmarried 18 to 24 year olds from the "other race" category. These data are shown in Table 7 of the Appendix. These numbers are small, but clearly growing over the last twenty years. The data suggest that those who identified themselves as "other race" to Current Population Survey interviewers have high school graduation rates similar to those for whites.

Distribution by gender and race/ethnicity. An important aspect of understanding the trends and patterns presented in Figures 13 through 24 is the composition of each quartile over time, and how the quartiles differ from each in terms of demographic composition at any given year. These data are presented in the Appendix Table 9 for unmarried 18 to 24 year old high school graduates.

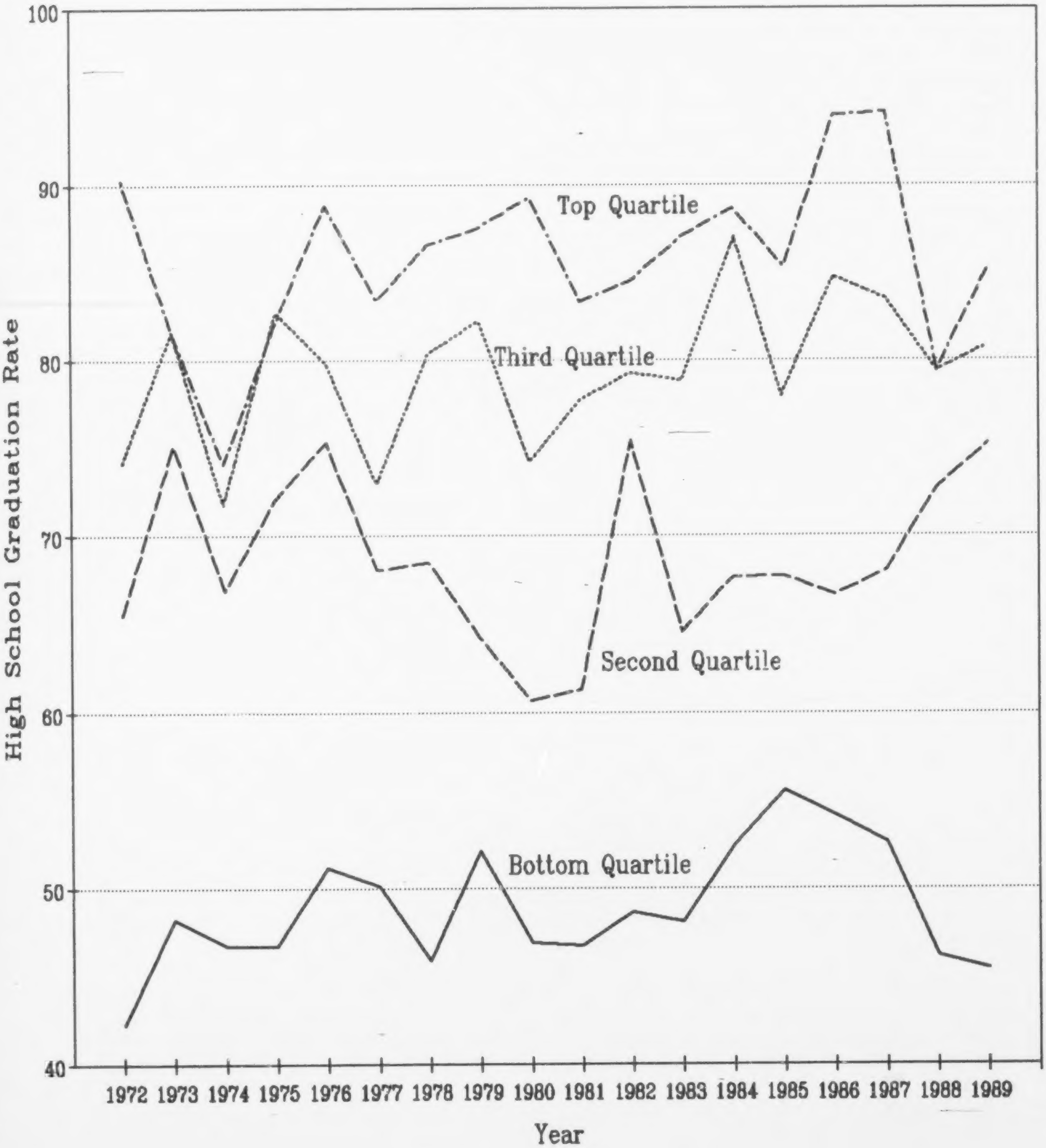
Females, for example, constitute 48 percent of all unmarried 18 to 24 year old high school graduates in 1989. But they constitute 54 percent of the bottom quartile, 47 percent of the second quartile, 47 percent of the third quartile, and 46 percent of the top quartile. Clearly, unmarried 18 to 24 year old female high school graduates are disproportionately concentrated in the bottom quartile of the family income distribution. And, by deduction, males are disproportionately concentrated in the top three quartiles of the family income distribution.

Other important distributions are those by race and ethnicity. White high school graduates, for example, constitute 81 percent of the high school graduates in 1989 (down from 88 percent in 1970). By family income quartiles, they constitute 63 percent of the bottom quartile, 80 percent of the second quartile, 88 percent of the third quartile, and 93 percent of the top quartile. Clearly, whites represent higher average family incomes than nonwhites.

Black high school graduates constitute 16 percent of all unmarried 18 to 24 year old high school graduates in 1989 (compared to 11 percent in 1970). But they constitute 34 percent of those from the bottom quartile of family income, 17 percent of those from the second quartile, 9 percent of the third quartile, and 4 percent of those from the top quartile. Black high school graduates are largely concentrated in the lowest range of family income.

Hispanic high school graduates make up 7 percent of all unmarried 18 to 24 year old high school graduates in 1989 (compared to 4 percent in 1972). They constitute 11 percent of those from the bottom quartile of family income, 9 percent of those from the second quartile, 6 percent of those from the third, and 3 percent of those from the top quartile. Like blacks, Hispanic high school graduates are concentrated in low family income ranges.

FIGURE 23
HIGH SCHOOL GRADUATION RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED HISPANICS 18 TO 24 YEARS
1972 TO 1989

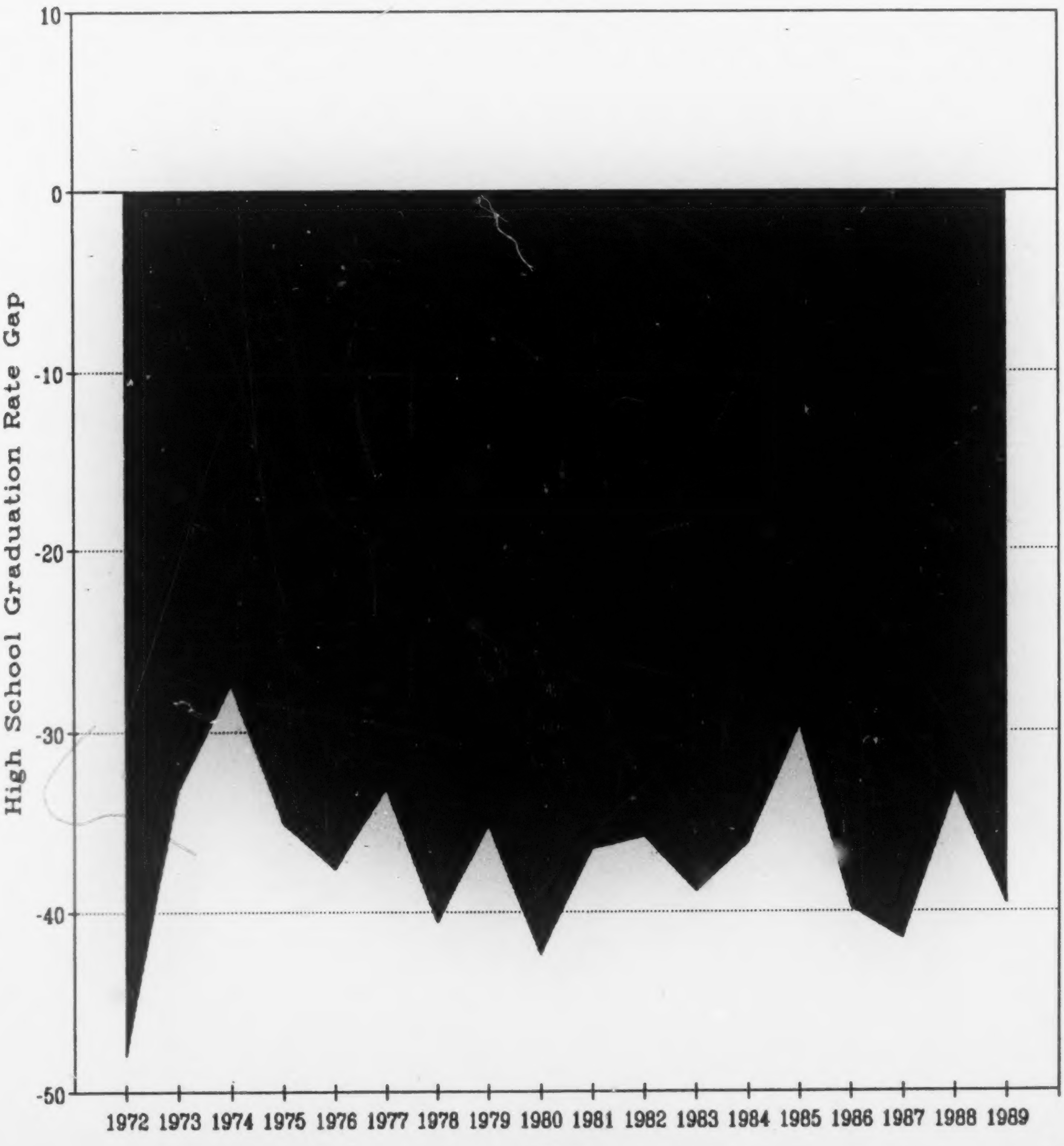


Source: Current Population Survey, Series P-20.

FIGURE 24

HIGH SCHOOL GRADUATION RATE GAP FOR BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED HISPANIC 18 TO 24 YEARS

1972 TO 1989



Source: Current Population Survey, Series P-20.

Summary

Family income is clearly, strongly, persistently, and pervasively related to chances of graduating from high school by the time a person is 18 to 24 years of age. This is true for every major demographic slice of the population: male, female, white, black, other race, and Hispanic. It was true in 1970, and it has been true each year through 1989.

One of the most striking findings in this study is the persistence of these findings over a period when the federal government sought to improve educational opportunities for students in elementary and secondary education and announced national goals to improve high school graduation rates. As Figure 11 shows, progress was made over the last twenty years in improving the chances for an unmarried young adult from the bottom quartile of the family income distribution to become a high school graduate. This progress is all the more notable when we consider that the bottom quartile of the family income distribution was significantly poorer in 1989 than it was in 1970. But in terms of the announced national goal of increasing the high school graduation rate to 90 percent of the population first by 1990, and now by 2000, the current rate of progress is clearly inadequate.

What little progress there was in improving the high school graduation rate was concentrated in just two demographic slices of the population--blacks and women. The progress was not shared by men, whites, or Hispanics during the last twenty years.

III. College Participation of Unmarried High School Graduates

Three quarters of the 18 to 24 year old high school graduates in 1989 were unmarried. This is up from two thirds in 1980, and about 57 percent in 1970, as young adults defer marriage. Because unmarrieds form the largest group and the group on which parental income background is available, we will analyze the college participation behaviors of this group.

The unmarried group corresponds largely to the dependent student population in student financial aid. In 1989, the Census Bureau reported that 94 percent of the unmarried high school graduates were "dependent family members." The new classification appeared in 1987, and thus only three years of data under the new system are available. The proportions of dependent family members varied by gender, where 97 percent of the males and 91 percent of the females were dependents, and by race and ethnicity, where 95 percent of the whites, 89 percent of the blacks, and 91 percent of the Hispanics were dependent family members. The remaining 6 percent were classified as "other marital and family status." This group includes persons who were divorced, separated, or widowed, three quarters of whom were female in 1989.

College Participation by All Unmarried High School Graduates

The college participation rates of all unmarried 18 to 24 year old high school graduates generally declined between 1970 and 1979, and then increased during the 1980s. These rates dropped from 61 percent in 1970, to 56 percent by 1979, and have since risen to nearly 62 percent in 1989. The 1988 figure of 62.5 percent is the highest recorded during the last two decades.

Significantly, not all groups within the population experienced this pattern. As we will show shortly, the decline between 1970 and 1979 is entirely attributable to a substantial decline in male college participation rates during the 1970s. The rate for females actually increased slightly during this period.

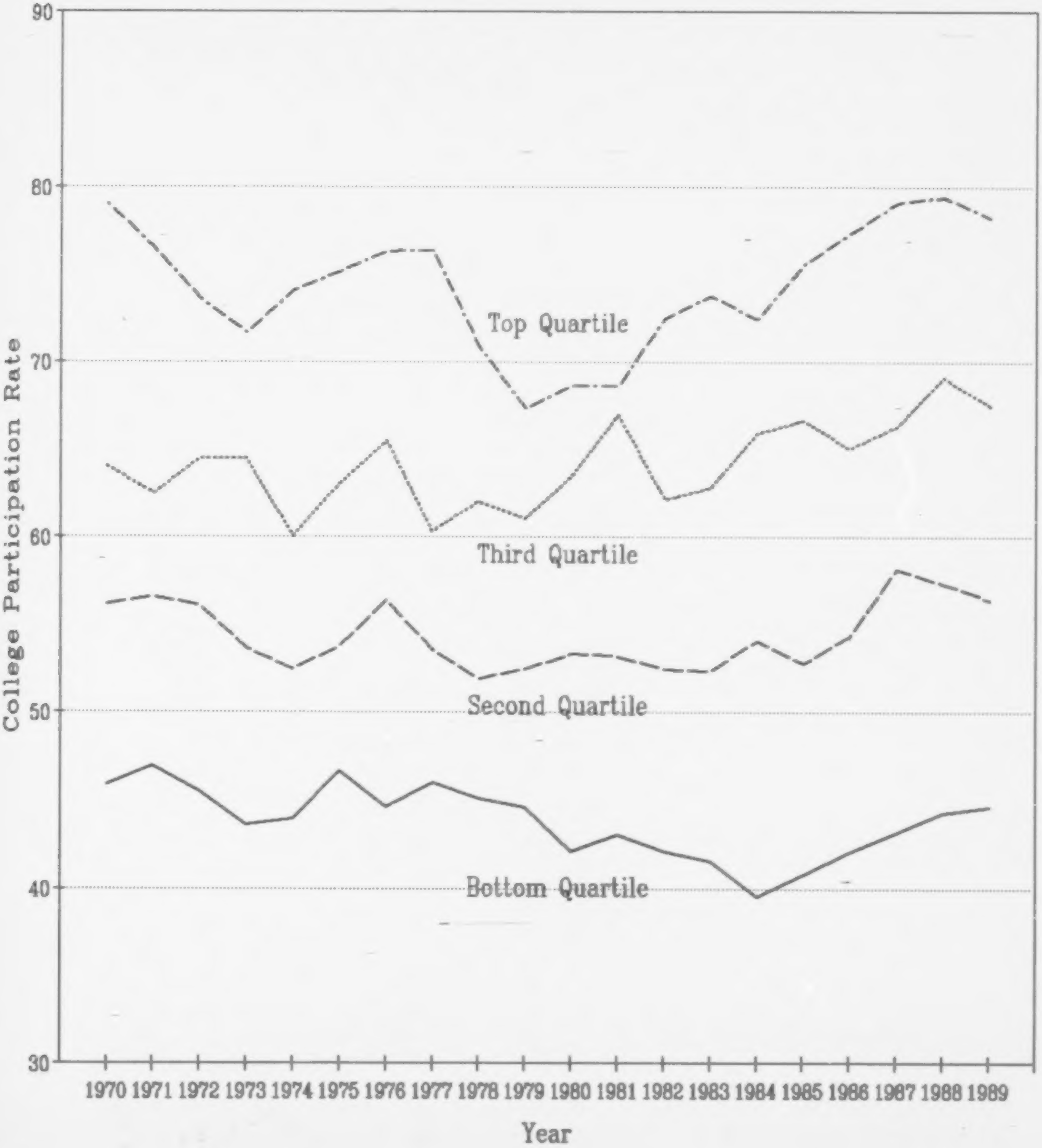
For purposes of this paper, we are primarily interested in the college participation behaviors of people from different family income backgrounds. We have divided the population of unmarried 18 to 24 year old high school graduates into four equal quartiles of the population based on family income, and we compare the college participation rates for each quartile to each other over the 20 year time span of available data. These quartiles have different income limit definitions for each year of the study due to the effects of inflation on incomes, and due to the effects of the redistribution of family income in America since the early 1970s. For 1989 the income limits of the four quartiles were as follows:

	Range
Bottom quartile	0 to $20,017
Second quartile	$20,018 to $35,447
Third quartile	$35,448 to $58,125
Top quartile	over $58,125

The income limits for each quartile for other years of this study are reported in Table 18 in the Appendix to this paper.

The college participation rates for unmarried 18 to 24 year old high school graduates from each quartile of family income are charted in Figure 25. This chart

FIGURE 25
COLLEGE PARTICIPATION RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED 18 TO 24 YEAR OLD HIGH SCHOOL GRADUATES 1970 TO 1989



Source: Current Population Survey, Series P-20.

illustrates the basic pattern of college participation that appears later in this report, just as it did earlier for high school graduation. College participation rates are directly related to family income. That is to say, college participation rates are lowest for high school graduates from the bottom quartile of the family income distribution, increase with higher family income quartiles, and are highest at the top family income quartile. In 1989, 45 percent of those from the bottom family income quartile had been or were enrolled in college, compared to 56 percent of those from the second quartile, 67 percent from the third quartile, and 78 percent of those from the top quartile of family income.

The differences in college participation rates between family income levels in 1989 have persisted throughout the years since 1970. Family income is one contributing factor to the differences in college participation. But it is also a proxy measure for a wide variety of other factors that influence college participation behavior, including family and school environments and experiences. These factors will be addressed in a future ACT study.

In the top two quartiles of family income, college participation rates reached their highest levels in 1988. In the second quartile, college participation rates peaked in 1987, and were just below that peak in 1988 and 1989.

However, a very different picture exists for high school graduates whose family incomes placed them in the bottom quartile. Here, despite some increase since 1984, the college participation rate in 1989 was below rates reached in the early 1970s. Here we see the second principal finding of this study: **while college participation rates increased in the 1980s over the 1970s for unmarried 18 to 24 year old high school graduates from the top three quarters of the family income distribution, they decreased for those from the bottom quartile.**

We will pursue this finding from the perspective of equity of higher educational opportunity, a goal of federal and state higher educational policy since passage of the federal Higher Education Act in 1965. Our measure of equity of higher educational opportunity will be the difference in the college participation rates of unmarried high school graduates from the top and bottom family income quartiles. When this difference is reduced over time, we are moving toward equity. When this difference increases, we are moving away from equity.

The assumption guiding this approach is that those in the top quartile of family income are immune only to the influence of governmental policies and programs designed to assist the economically disadvantaged student. Students from top family income quartiles are likely to be influenced by a more limited range of influences--the changing labor market demand for college graduates, social equity movements affecting broad segments of the population, and the effects of war, military drafts, and draft deferments for college study. Such influences also operate on students from low family income backgrounds, but low income students have the added influence of governmental programs targeted on their collegiate enrollment behaviors.

Given the role played by higher education in improving one's wealth and status in life, the equity component of higher educational opportunity provides the means by which disadvantaged populations may seek the rewards and benefits our social and economic system offers to those educated and trained to take advantage of them. Those not prepared have greatly diminished opportunities to improve their welfare, and in fact are likely to experience a declining living standard throughout their adult lives, as has been the case since 1973 for those with less than collegiate educations.

In Figure 26 we have plotted the difference in the college participation rates for unmarried 18 to 24 year old high school graduates from the top and bottom family income quartiles. This "gap," as we use the term in this study, is very wide for every year between 1970 and 1989. However, this gap narrowed between 1970 and 1979, from 33 percent in 1970 to 23 percent by 1979. This movement toward equity reflected a relative gain in college participation for those from the bottom family income quartile of about 288,000 unmarried 18 to 24 year old high school graduates.

One paradox of this analysis is that there was no absolute gain in the college participation rate from the bottom quartile. Rather, the relative gain was achieved by a sharp decline in the college participation rate in the top quartile of family income. If indeed the top quartile is distinguished from the bottom quartile only by family income and targeted governmental aid, and other differences affect all income groups equally over this time period, then the changes in college participation must be the result of the targeted external changes that produce different effects on the college participation rates of students from the extremes of family income.

Three conditions clearly influenced college enrollment behavior during the 1970s: the draft exemption for college males until 1973, the apparent deterioration in the job market for college graduates (Freeman, 1976), and the growth in student financial aid, especially through federal programs. The first two of these conditions operated across all income levels, but the student aid growth was clearly directed toward the lower end of the family income range. As others have suggested (Breneman, 1982, Hook, 1982), the growth in federal student aid during the 1970s may have served to avert an absolute decline in the college participation rates of the populations to which that aid was targeted.

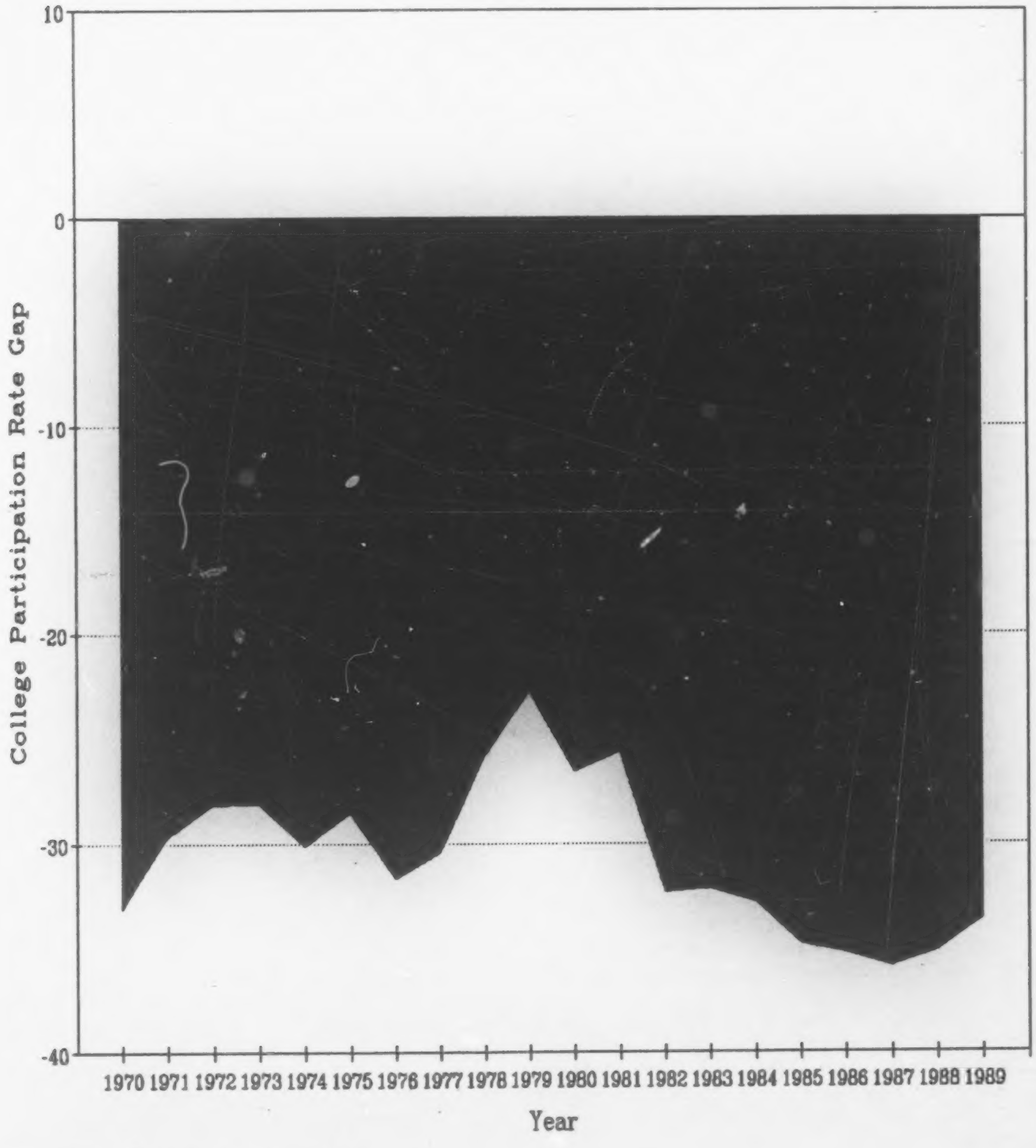
After 1979 the gap in the college participation rates of the top and bottom quartiles of family income widened. The college participation rates declined in the bottom quartile, and increased sharply in the top quartile (and in the second and third quartiles as well). The participation rate gap widened from 23 percent in 1979 to 36 percent by 1987 (and 34 percent by 1989). The college participation rate gap was greater between 1985 and 1989 than it had been at any other time during the period under study, 1970 through 1989.

The widening of this gap meant that about 312,000 fewer unmarried 18 to 24 year old high school graduates from the bottom quartile of family income had gone to college in 1989 than would have been the case if the college participation rate gap had not widened after 1979. Instead of increasing by .04 percent between 1979 and 1989, the college participation rate in the bottom quartile would have increased by 11 percent, as it did for the top quartile students. Even in the intermediate quartiles, college participation rates increased between 1979 and 1989. In the second quartile the increase was about 4 percent, and in the third quartile the gain was 6 percent. Clearly, the problem in higher educational participation during the 1980s has been concentrated in the bottom quartile of the family income distribution.

College Participation Rates by Gender

College participation rates for males and females from the four quartiles of family income are generally similar, but with some interesting differences. Their participation rates are charted in Figures 27 and 29.

FIGURE 26
COLLEGE PARTICIPATION RATE GAP FOR BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED HIGH SCHOOL GRADUATES
1970 TO 1989



Source: Current Population Survey, Series P-20.

The similarity is mainly in the constant and strong relationships between family income and college participation rates. For both males and females, college participation rates are highest in the top quartile of family income, lower in lower quartiles, and lowest in the bottom quartile. Beyond this similarity, however, ar differences worth describing in more detail.

Males. The college participation rate for unmarried male high school graduates age 18 to 24 declined from 66 percent in 1970, to 55 percent by 1979, then increased to 59 percent by 1989. Despite the increase during the 1980s, the highest rate reached is still well below college participation rates for males between 1970 and 1973 when military draft exemption for males enrolled in college was still in effect.

When male participation is disaggregated into family income quartiles, the strong pattern illustrated throughout this paper appears again. Across all four quartiles, male college participation rates are clearly and strongly related to family income. These rates dropped during the 1970s, then increased after different years in the 1980s. In the top family income quartile, where the decline in rates was greatest during the 1970s, the increase after 1979 was also greatest.

The decline in male college participation rates after 1970 was shortest for the top quartiles, and longest for the bottom quartiles. In the top two quartiles, the rate reached bottom in 1979. In the second quartile it reached bottom in 1983. In the bottom quartile the decline continued until 1986. All four quartiles have experienced increases in college participation rates recently, but because the turnaround has been under way longer at higher family income levels, a greater share of the 1970s' loss has been recovered at higher income levels than at the lowest.

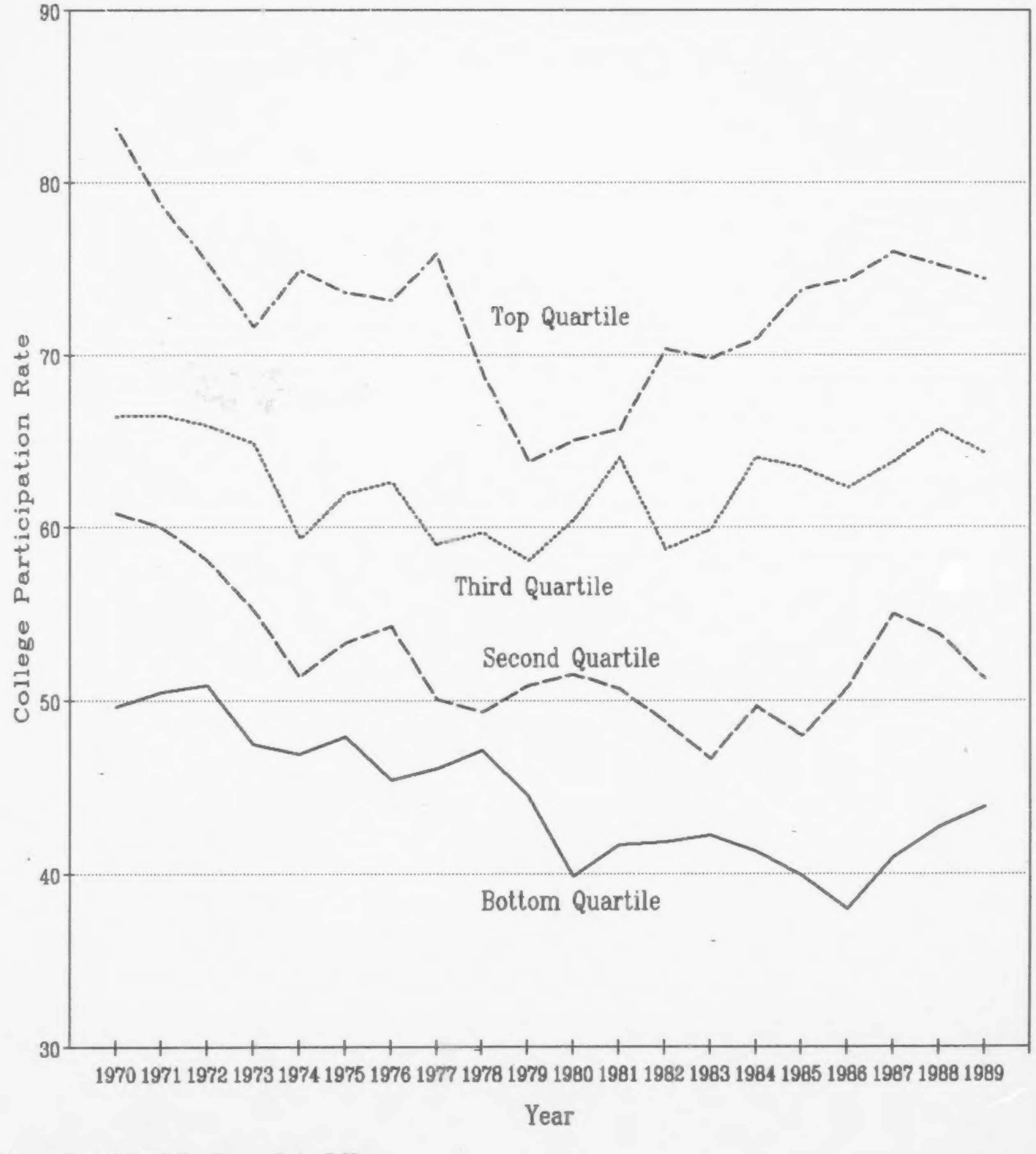
The difference in the college participation rates of males from the top and bottom quartiles of the family income distribution is plotted in Figure 28, which repeats the pattern of Figure 26. The college participation rate gap closed between 1970 and 1979, and then widened sharply between 1979 and 1986. In fact, in 1986 and 1987 this gap was wider than at any other point between 1970 and 1989.

Females. College participation rates for unmarried female high school graduates age 18 to 24 have increased substantially between 1970 and 1989. In 1970, 57 percent were participating or had participated in college. By 1989 this had increased to 65 percent. This means that 435,000 more young women had college experience by 1989 than would have been the case at 1970 rates.

This pattern differs from the experience of males during the 1970s, when male rates were declining while female rates were generally increasing slightly. Even during the 1980s, however, while male college participation rates have increased by 5 percent, the rate for females has increased by 7 percent. Not since 1975 has the male college participation rate exceeded that for females. The current difference of 5 percent more females than males is greater than at any point in the time period under study.

College participation rates for females are disaggregated by family income quartiles in Figure 29. The usual pattern persists here too. College participation rates are positively correlated with family income, and always have been. In each quartile, there is a positive slope to the trend. In each quartile (except the bottom quartile) the lowest college participation rates for females occur in the early 1970s, and the highest rates occur in 1988 or 1989.

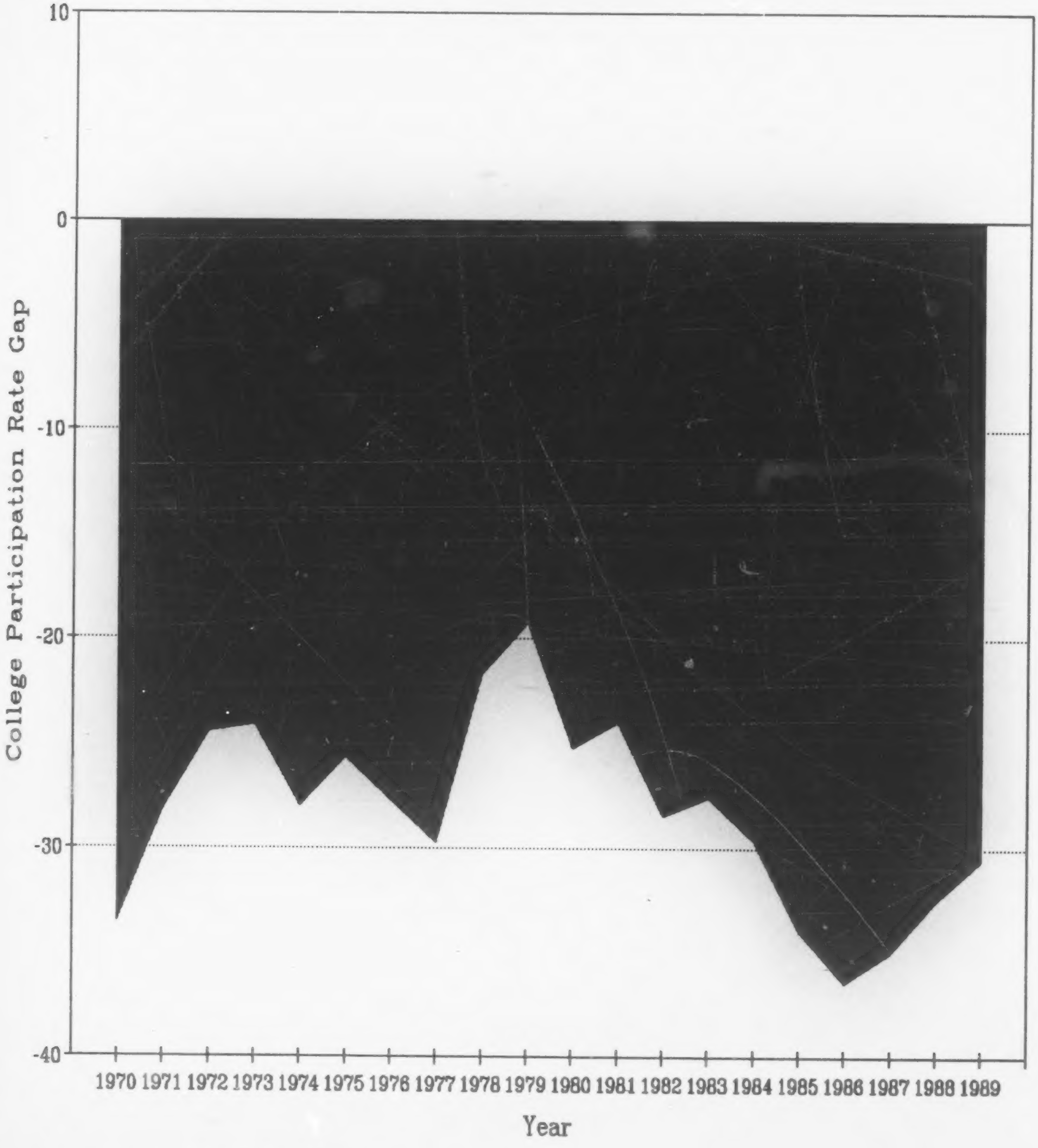
FIGURE 27
COLLEGE PARTICIPATION RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED MALES 18 TO 24 YEARS
1970 TO 1989



Source: Current Population Survey, Series P-20.

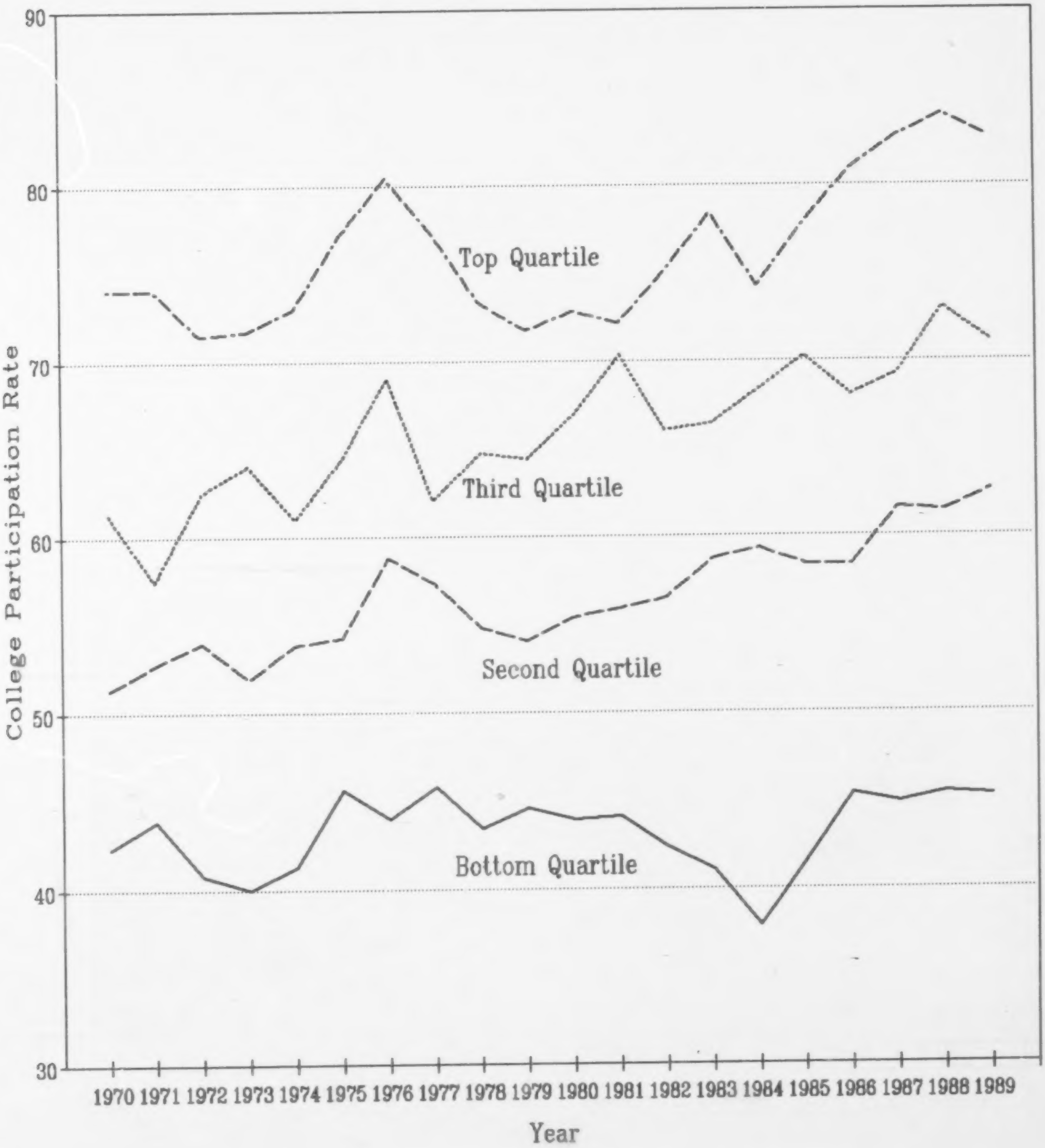
FIGURE 28

COLLEGE PARTICIPATION RATE GAP FOR BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED MALE HIGH SCHOOL GRADUATES 1970 TO 1989



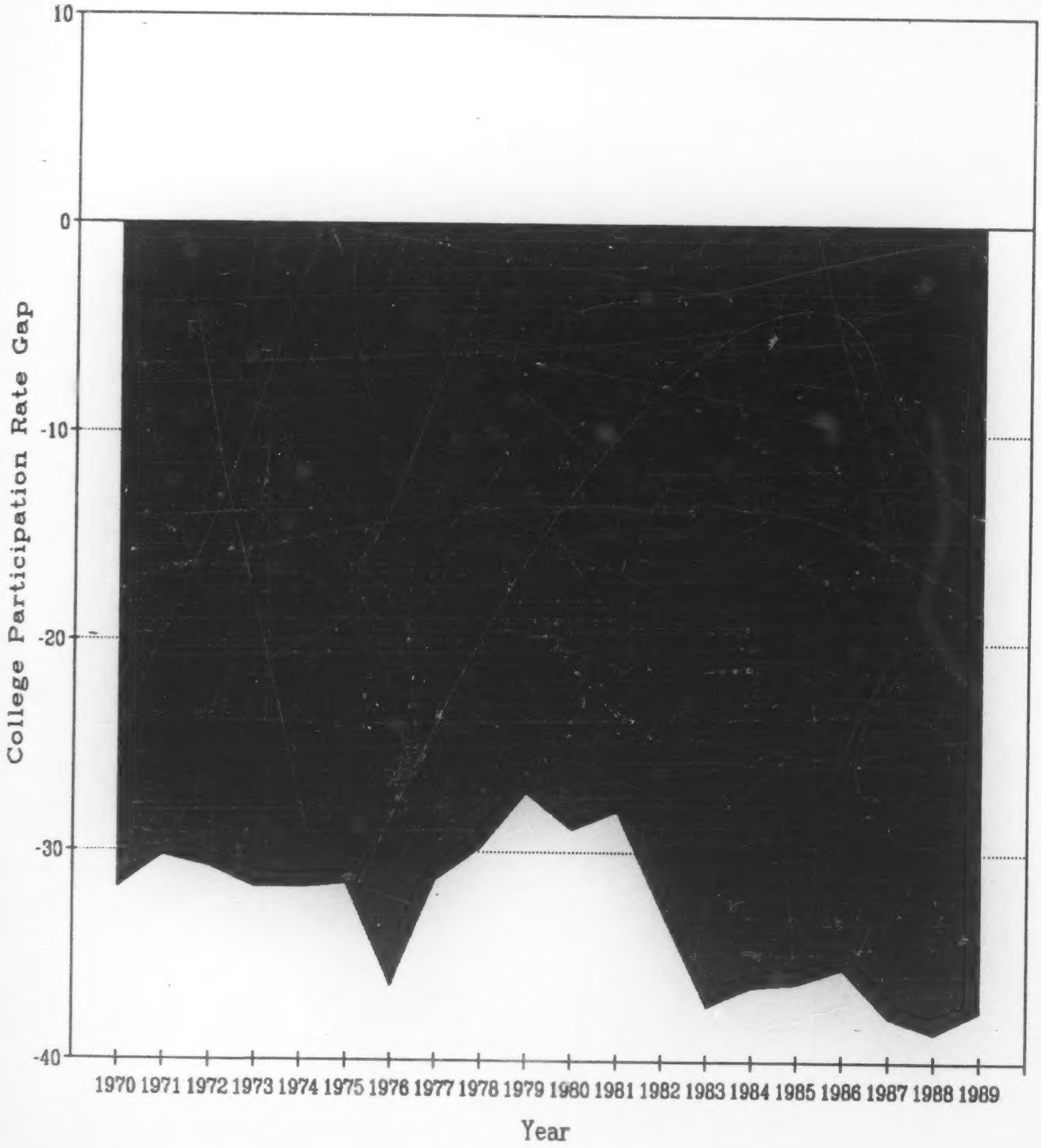
Source: Current Population Survey, Series P-20.

FIGURE 29
COLLEGE PARTICIPATION RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED FEMALES 18 TO 24 YEARS
1970 TO 1989



Source: Current Population Survey, Series P-20.

FIGURE 30
COLLEGE PARTICIPATION RATE GAP FOR BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED FEMALE HIGH SCHOOL GRADUATES
1970 TO 1989



Source: Current Population Survey, Series P-20.

The difference in the college participation rates for females from the top and bottom quartiles of the family income distribution in plotted in Figure 30. This gap is generally greater than the gap for males for each year of the study. But the same pattern persists: a slight closing of the gap between 1970 and 1979, and a widening thereafter. In 1988 the gap was wider than it had been at any time during this 20 year period.

College Participation Rates by Race/Ethnicity

We have also calculated the college participation rates for whites, blacks, and Hispanics in the same format as males and females. The results are charted, and with some interesting exceptions the trends and patterns are similar for each population group.

Whites. Whites constituted about 81 percent of the population of unmarried 18 to 24 year old high school graduates in 1989, and thus college participation rates look very similar to the participation rates shown in Figure 32 for the total population. This percentage is down from 83 percent in 1980, and 88 percent in 1970, as the population of nonwhites has become a larger share of the high school graduate population over the last two decades.

Overall, the college participation rate for whites declined between 1970 and 1979, from 63 percent of the high school graduates to 57 percent. Then the rate increased to nearly 64 percent in 1988. The increase in the college participation rate for whites between 1979 and 1989 means that 601,000 more whites were or had been enrolled in college in 1989 compared to 1979 rates.

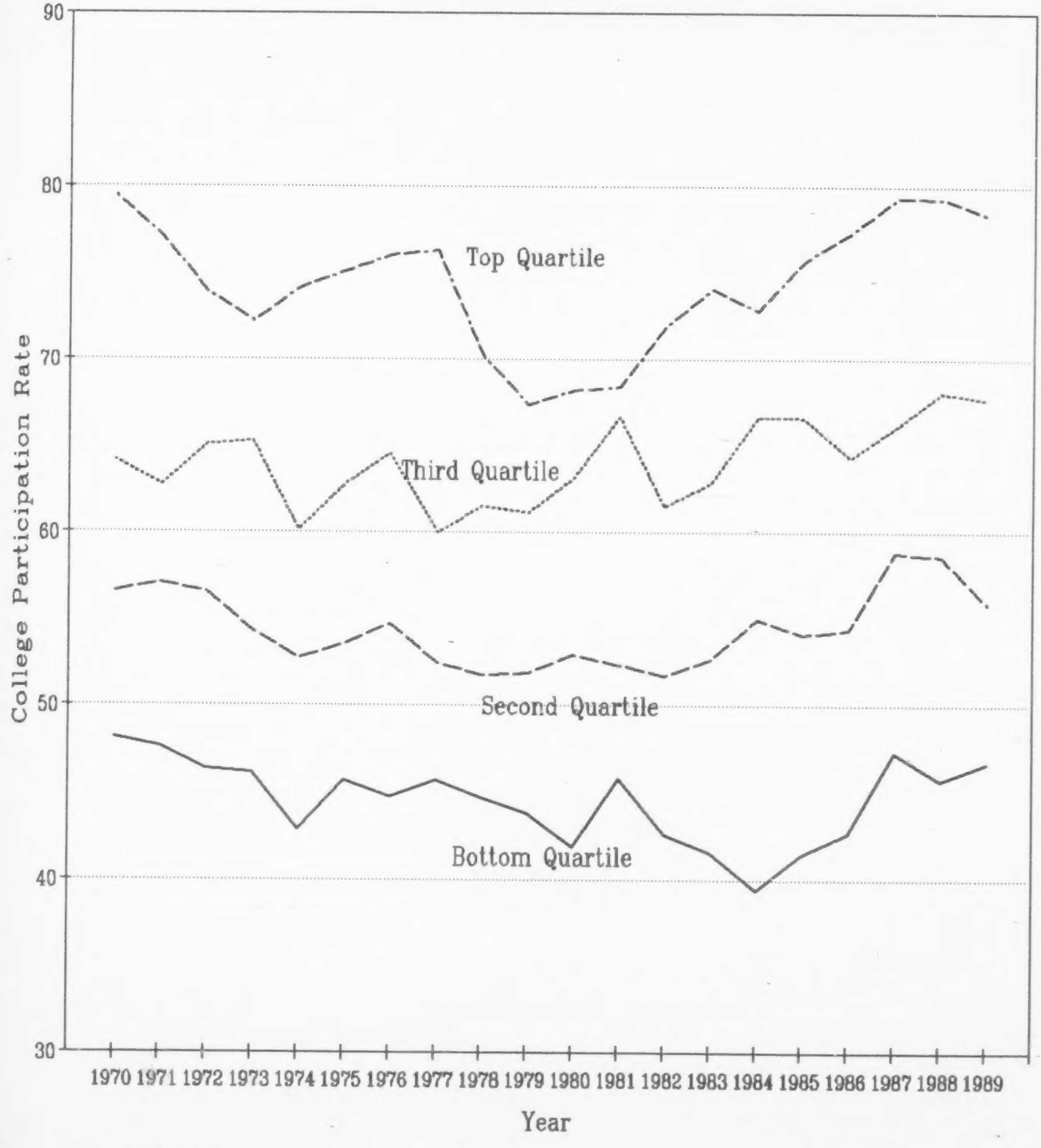
College participation rates for unmarried white high school graduates age 18 to 24 by quartiles of family income are shown in Figure 31. The general pattern of college participation rates increasing with family income holds here too. In 1989 the college participation rate for high school graduates in the bottom quartile of the family income distribution was 47 percent, compared to 56 percent in the second quartile, 68 percent in the third quartile, and 78 percent in the top quartile.

In each of the four quartiles college participation rates declined during the 1970s and have increased during the 1980s, although in a highly uneven fashion. During the 1970s the decline was greatest, and during the 1980s the increase was greatest in the top quartile. However, growth in the 1980s only brought the college participation rate for the top quartile back to the 1970 level by 1987. In the third and second quartiles, the rates are at record highs in 1987 through 1989. In the bottom quartile, the 1989 college participation rate was below the rate for the early 1970s.

The college participation rate gap between the top and bottom quartiles is shown in Figure 32. The general pattern prevails: a closing of the gap between 1970 and 1981, and a widening through 1986. The gap has been greater since 1983 than at any prior time.

Blacks: The college participation rates for unmarried black high school graduates age 18 to 24 have fluctuated over a wide range between 1970 and 1989, and differ from the trends for whites in important respects. The rates currently are well below rates reached in the mid 1970s. Because of the importance of black enrollment problems in higher education, we will devote special attention to the analysis of black enrollment patterns and trends in this section.

FIGURE 31
COLLEGE PARTICIPATION RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED WHITES 18 TO 24 YEARS
1970 TO 1989

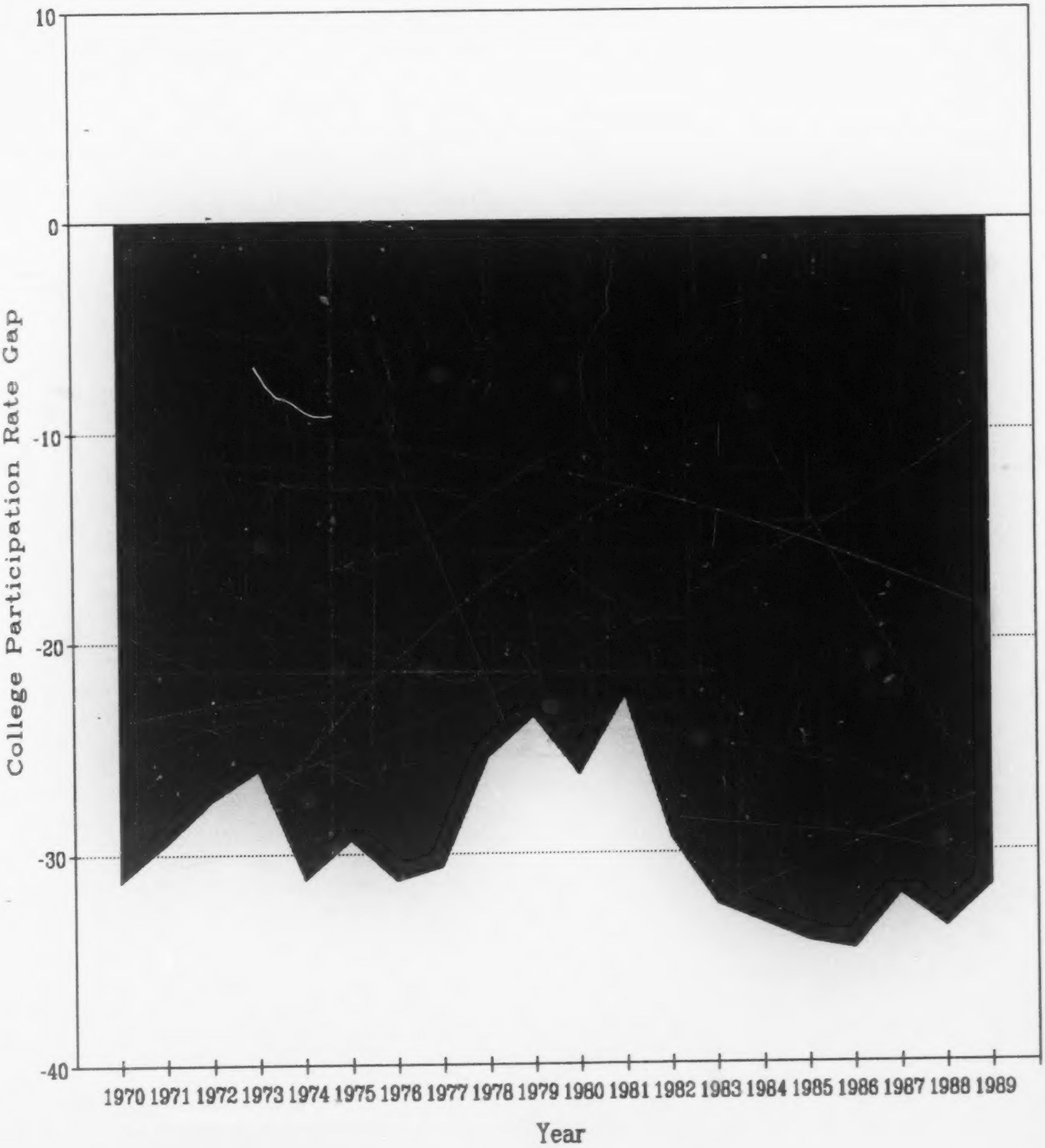


Source: Current Population Survey, Series P-20.

FIGURE 32

COLLEGE PARTICIPATION RATE GAP FOR BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED WHITE HIGH SCHOOL GRADUATES

1970 TO 1989



Source: Current Population Survey, Series P-20.

In 1970, 45 percent of the unmarried black high school graduate population age 18 to 24 had participated or were participating in college. This rate increased to a peak of 55 percent in 1976, then dropped steadily to a low of 44 percent by 1985, and has since increased to 49 percent. This pattern is consistent with other data that show black college enrollment rates peaking in 1976, and holding at a relatively high level through the remainder of the 1970s, before dropping sharply during the first half of the 1980s. The drop between 1976 and 1985 means that about 223,000 fewer black high school graduates age 18 to 24 were going to or had gone to college in 1985 than would have if 1976 participation rates had persisted. Instead of the 834,000 actually enrolled in 1985, there would have been 1,057,000 enrolled, or about 27 percent more than there were in 1985.

Between 1985 and 1989, the college participation rate for unmarried 18 to 24 year old black high school graduates has increased, but only about half of the loss between 1976 and 1985 had been recovered by 1989.

More important to our study here are the college participation rates of blacks from the four quartiles of family income over the period from 1970 to 1989. As shown in Figure 33, college participation rates for blacks vary directly with family income, just as they do for males, females, and whites. In 1989, the college participation rate for unmarried black high school graduates from the bottom quartile of family income was 39 percent, compared to 57 percent from the second quartile, 65 percent from the third quartile, and 76 percent from the top quartile.

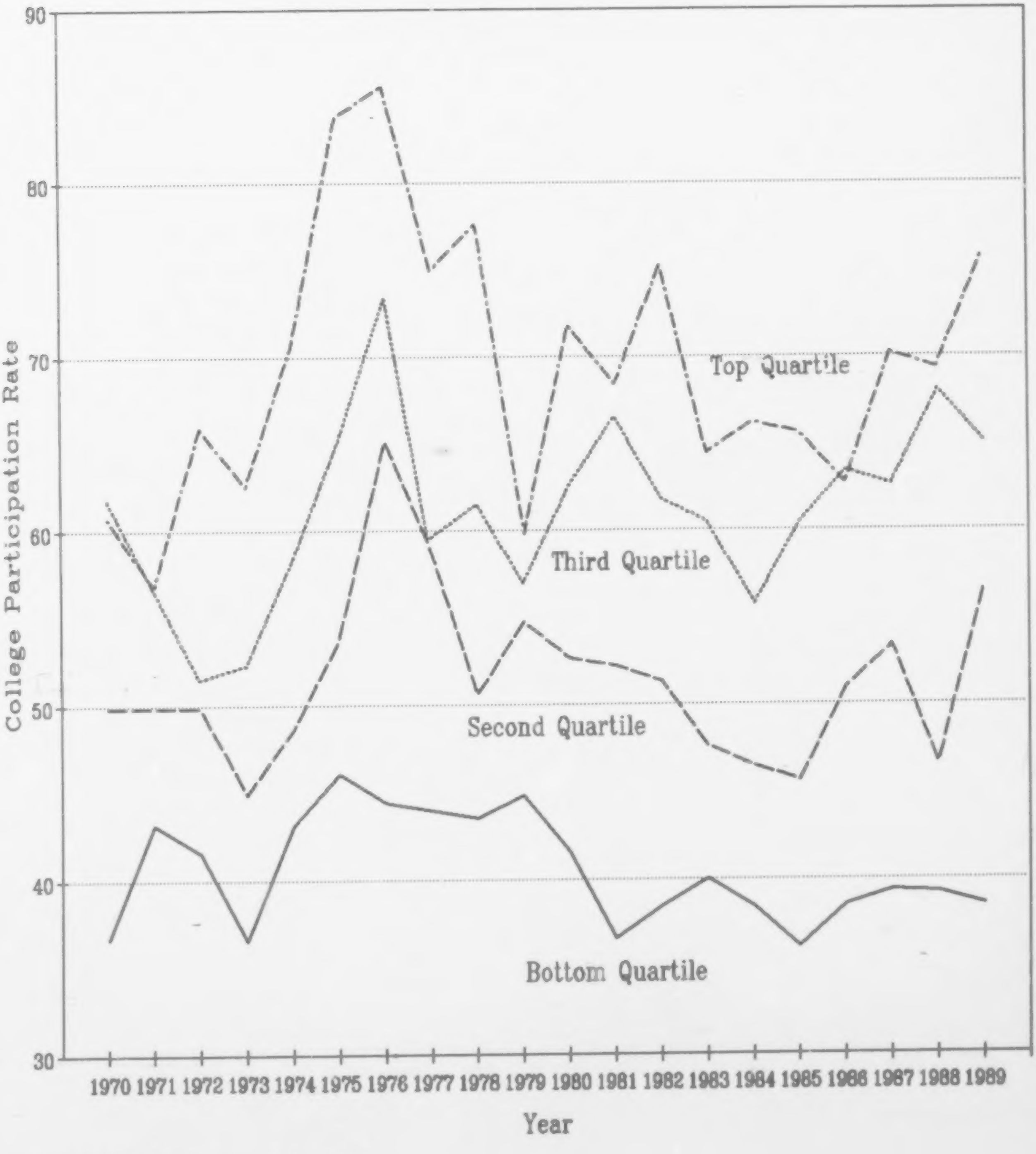
Between 1970 and 1989, black college participation rates from each of the four quartiles have generally moved in unison. When the rates went up or down for one quartile, other quartiles did the same. However, magnitudes of change varied considerably between family income quartiles. This is most notable in the years between 1974 and 1977 when college participation rates for blacks increased sharply, but only in the top three quartiles of family income. College participation rates in the bottom quartile held largely flat during this period.

After peaks reached in 1976, the college participation rates declined through about 1985 for each of the four quartiles of family income. College participation rates for all four quartiles have increased between 1985 and 1989.

The college participation rate gap between blacks from the top and bottom quartiles of the family income distribution is plotted in Figure 34. This chart, unlike previous charts, shows the gap to be greatest in the mid 1970s when college participation rates for blacks from the top three family income quartiles increased sharply and the bottom quartile held constant. Except for this mid 1970s phenomenon, the college participation rate gap for bottom quartile blacks has been generally greater during the 1980s than it was for the remainder of the 1970s.

Hispanics. The Hispanic data were first reported by the Census Bureau for 1972, so the available time series is somewhat shorter than for other groups under study here. Also, this population is relatively small. The procedures employed to obtain sample data therefore contain more statistical "noise" than is true for larger populations such as males, females, whites, and blacks. Furthermore, the Hispanic community consists of clearly distinct subgroups, such as Mexican- and Cuban-Americans, that are disproportionately represented at different levels of family income in the following data. Despite these limitations, we can still gain useful insight into Hispanic participation in higher education from analysis of the Current Population Survey data.

FIGURE 33
COLLEGE PARTICIPATION RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED BLACKS 18 TO 24 YEARS
1970 TO 1989

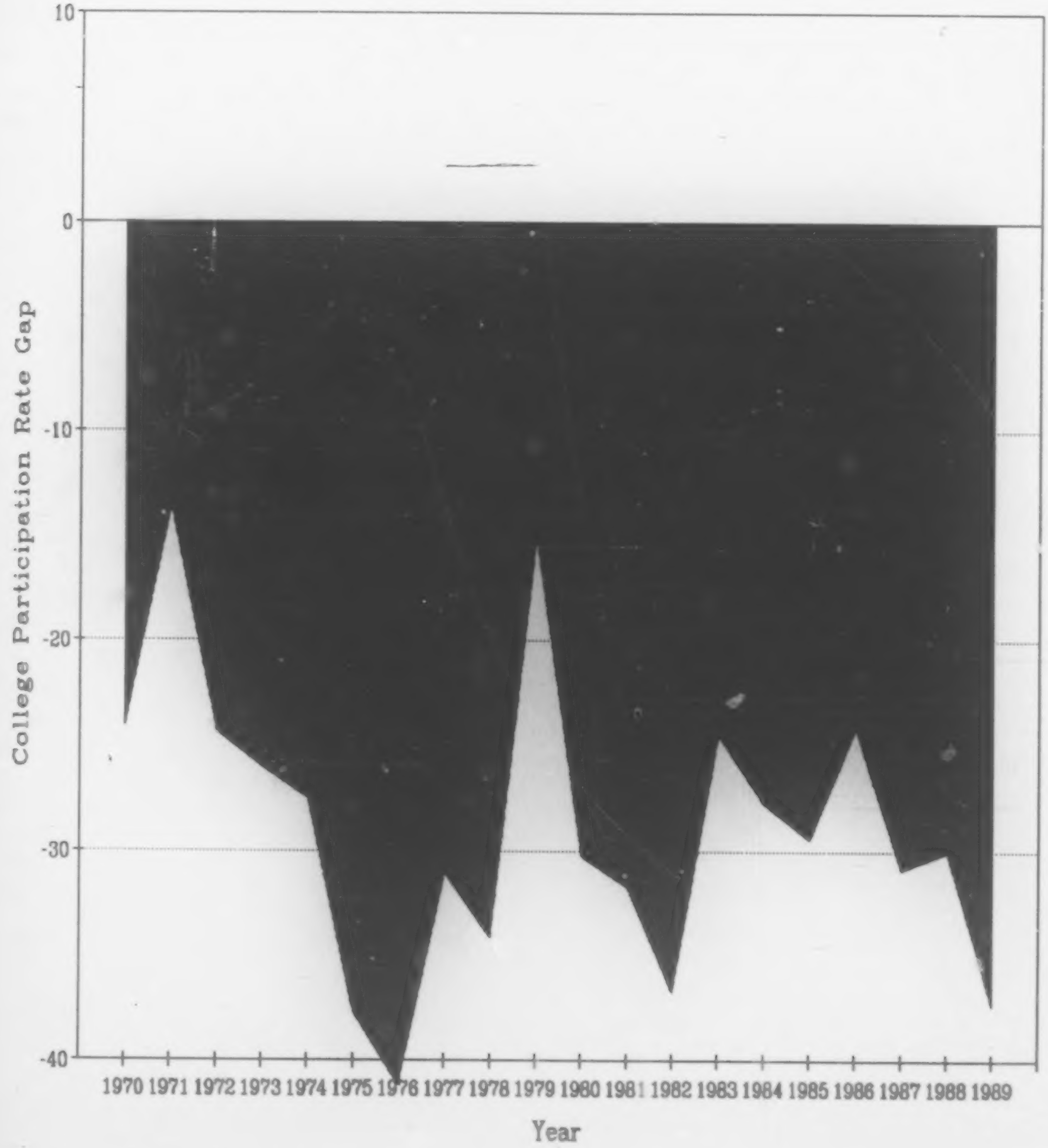


Source: Current Population Survey, Series P-20.

FIGURE 34

COLLEGE PARTICIPATION RATE GAP FOR BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED BLACK HIGH SCHOOL GRADUATES

1970 TO 1989



Source: Current Population Survey, Series P-20.

College participation rates for unmarried Hispanic high school graduates age 18 to 24 peaked at about 60 percent in 1975, about the same time black college participation rates peaked. After 1977 these rates dropped off to an average of about 51 percent in subsequent years through 1989, with little trend evident in the latter data.

The Hispanic population of high school graduates, unlike the population of whites and blacks, continued to grow while the population for others had begun to decline. For whites, the number of unmarried 18 to 24 year old high school graduates peaked in 1982 at 10.8 million. For blacks it peaked in 1984 at 2.1 million. However, for Hispanics the peak year was 1987 at .9 million.

We have calculated college participation rates by quartiles of family income for the Hispanic population of unmarried 18 to 24 year old high school graduates. These are shown in Figure 35. Given certain anomalies due to the small number sampling problem, the usual pattern prevails and college participation rates vary directly with family income. The average college participation rate over the last five years for Hispanics from the bottom quartile of the family income distribution is 44 percent, compared to 52 percent from the second quartile, 60 percent from the third quartile, and 68 percent from the top quartile.

Within the family income quartiles, college participation rates have behaved similarly, with one important exception. In the top three quartiles, college participation rates generally peaked in the mid 1970s, decreased through 1979, and have increased since then through 1988. In the bottom family income quartile, however, college participation rates have not increased during the 1980s.

The result of the preceding finding is that the college participation rate gap between the top and bottom quartiles of family income has widened during the 1980s compared to the 1970s. As shown in Figure 36, the general trend between 1972 and 1988 is for a widening gap in Hispanic college participation over time.

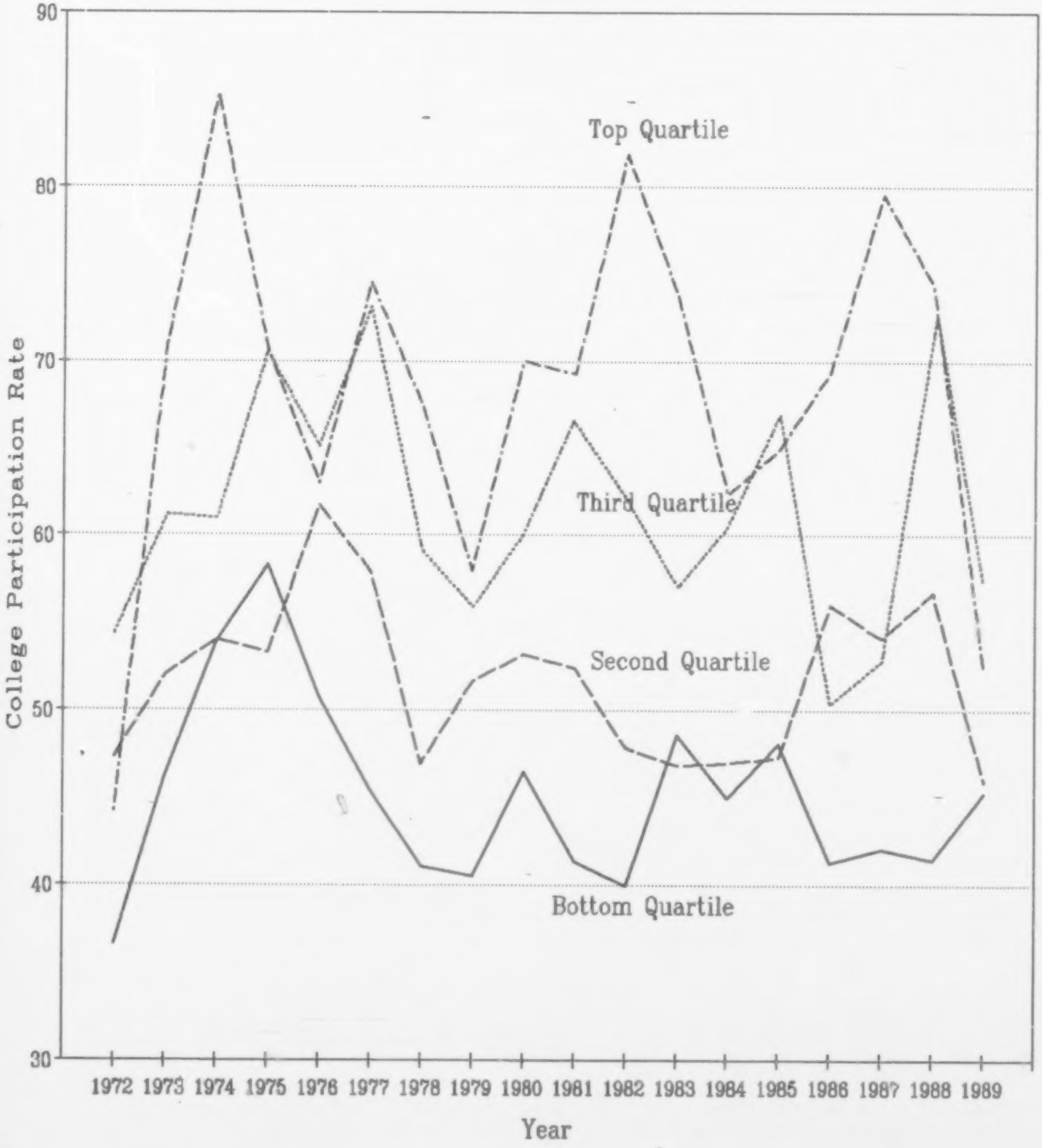
College Participation Behaviors

College participation among 18 to 24 year olds as tabulated by the Census Bureau consists of three mutually exclusive conditions: currently enrolled in college, not currently enrolled but having completed 1 to 3 years of college, and not currently enrolled but having completed four years or more of college. In this section we will examine each situation separately by level of family income.

College enrollment rates. Overall, the rates at which unmarried 18 to 24 year old high school graduates were enrolled in college declined between 1970 and 1978, stabilized through 1985, and have increased since then.

Figure 37 shows these data by family income quartiles. The usual pattern prevails: college enrollment rates were lowest for lowest family income students and highest for highest family income students for every one of the last twenty years. The overall decline in the college enrollment rate ended sooner in the higher family income levels then in the lower levels. In the top family income quartile, the decline in college enrollment rates bottomed out in 1980 and increased thereafter. But in the bottom quartile, the decline continued until 1984 before beginning to recover. This decline, as suggested in Figure 25, was driven exclusively by declining male participation in college during this period.

FIGURE 35
COLLEGE PARTICIPATION RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED HISPANICS 18 TO 24 YEARS 1972 TO 1989

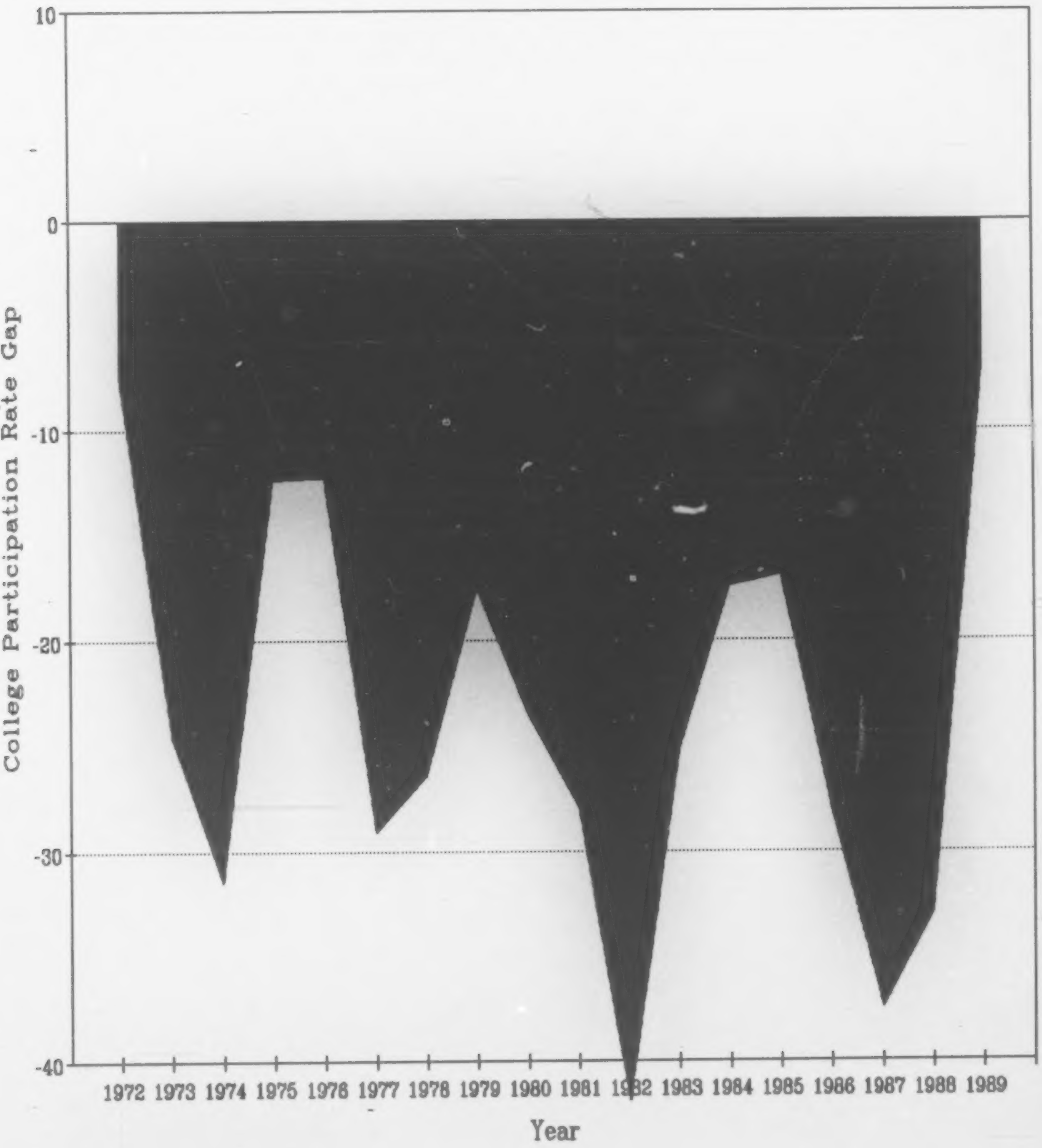


Source: Current Population Survey, Series P-20.

FIGURE 36

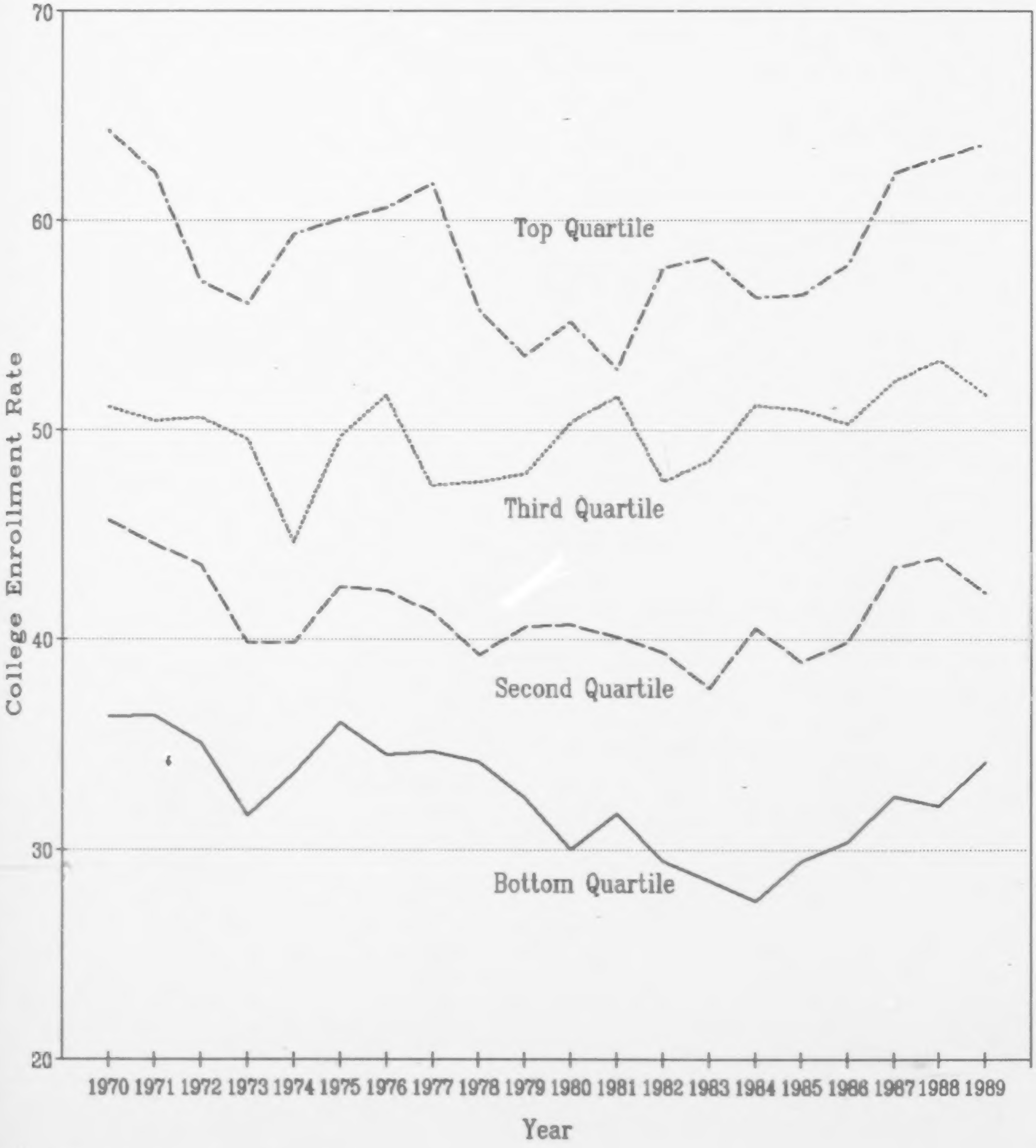
COLLEGE PARTICIPATION RATE GAP FOR BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED HISPANIC HIGH SCHOOL GRADUATES

1972 TO 1989



Source: Current Population Survey, Series P-20.

FIGURE 37
COLLEGE ENROLLMENT RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED HIGH SCHOOL GRADUATES AGE 18 TO 24
1970 TO 1989



Source: Current Population Survey, Series P-20.

The effect of differences in the timing of enrollment rate recovery between the top and bottom quartiles of family income is shown in Figure 38. Because of the lag in enrollment rate recovery in the bottom quartile, the college enrollment rate gap widened sharply during the 1980s compared to the experience of the previous decade. Between 1970 and 1981, the college entrance rate gap averaged 24 percent. However, between 1982 and 1989 this gap averaged 29 percent and the gap was wider for every year between 1982 and 1989 than it had been for every year between 1971 and 1981.

1 to 3 years college. About 15 percent of the 18 to 24 year old unmarried high school graduates who reported college participation indicated that they had completed 1 to 3 years of college and were no longer enrolled. This may indicate that they had dropped out of college before completing their studies, or that they had in fact fulfilled their academic plans for college in less than 4 years. About 9 to 10 percent of the unmarried high school graduates have reported this in the Current Population Survey over the last twenty years.

Of particular interest in this study is what these rates have been within each of the family income quartiles over the last two decades. We have found these data especially difficult to portray graphically and thus sought an alternative graphic expression to convey important findings. In the alternative, Figure 39, we have omitted the lines, shown the data points, and added a trend line fitted to the data for each family income quartile.

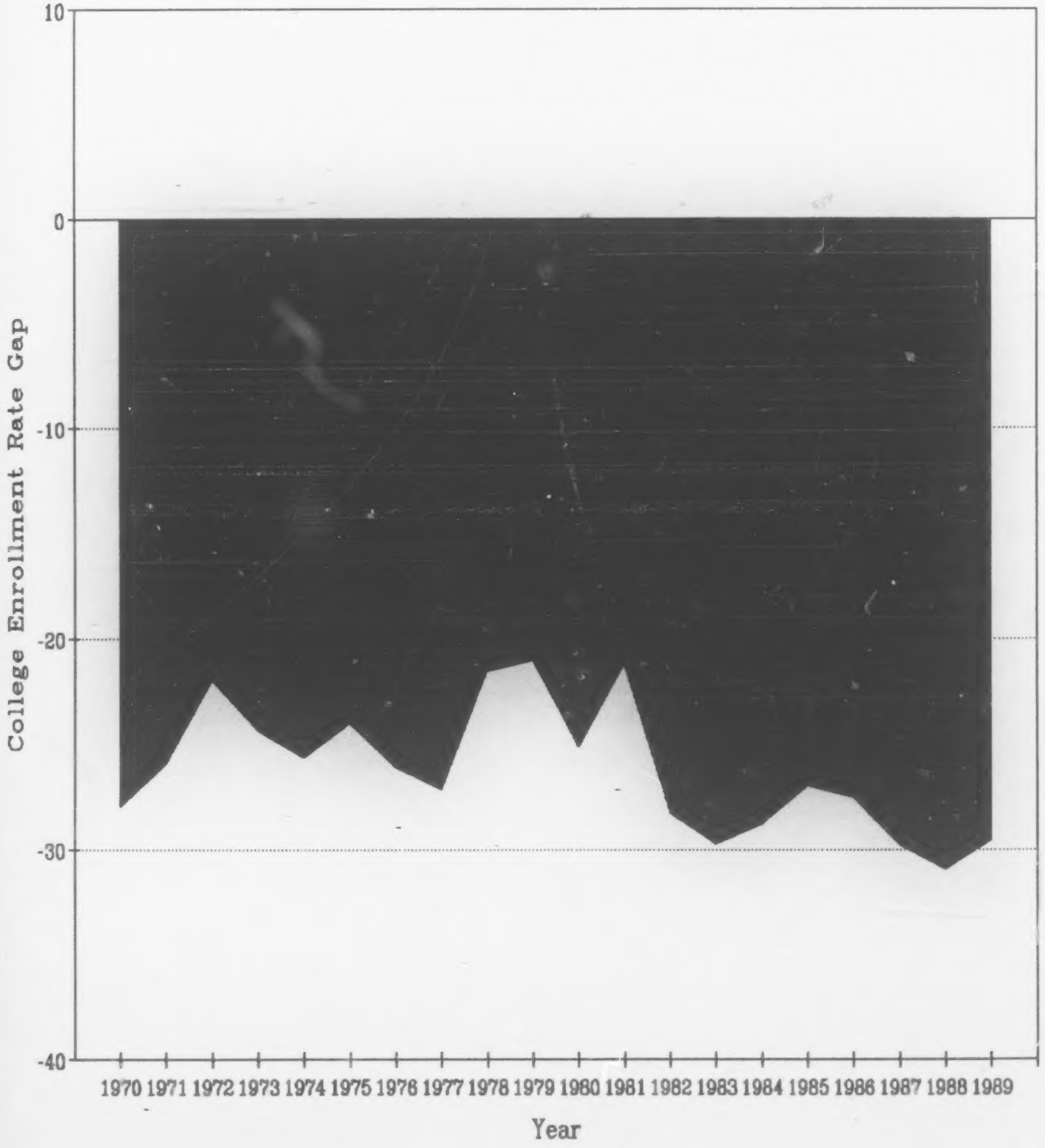
The results are quite striking. In the bottom two quartiles of family income, the trend lines show distinct increases in the rate at which unmarried high school graduates have reported 1 to 3 years of college completed and no further college enrollment. The trend line for the third quartile is somewhat flatter. But the trend line for the top quartile is reversed in slope: over the last two decades the proportion of top family income quartile high school graduates stopping their collegiate studies before completing the baccalaureate degree has decreased. Perhaps an increasing share of college students from the bottom half of the family income distribution are dropping out of college before completing the baccalaureate program, while a decreasing share of students from the top quartile have had to do so. Or, for reasons suggested by data reported later in this study regarding the growth in part-time enrollment, perhaps students from the bottom half of the family income distribution have stopped out of college temporarily to work and later return to college, while students from the top quartile have not needed to do so.

The Current Population Survey data do not permit us to delve much further into this situation. As shown in Figures 1 through 3, the labor market has rewarded those who completed four years or more of college compared to those with lesser levels of educational attainment. The unmarried high school graduates from the top family income quartile appear to have responded to this signal. But especially in the bottom two quartiles of family income, either a growing proportion of unmarried high school graduates have reduced their academic aspirations, or been unable to complete their baccalaureate studies, or both, during the last twenty years.

4 years or more of college. The proportion of unmarried 18 to 24 year old high school graduates reporting that they had completed four years or more of college in the Current Population Survey increased during the last twenty years. In 1970, 3.4 percent reported this attainment, compared to 4.5 percent by 1989. While these percentages sound small, remember that the years 18 to 24 represent a time of transition of young adults from dependent family members to independence and marriage. For many, completing college probably marks the beginning of that independence.

FIGURE 38

COLLEGE ENROLLMENT RATE GAP FOR BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED HIGH SCHOOL GRADUATES 1970 TO 1989

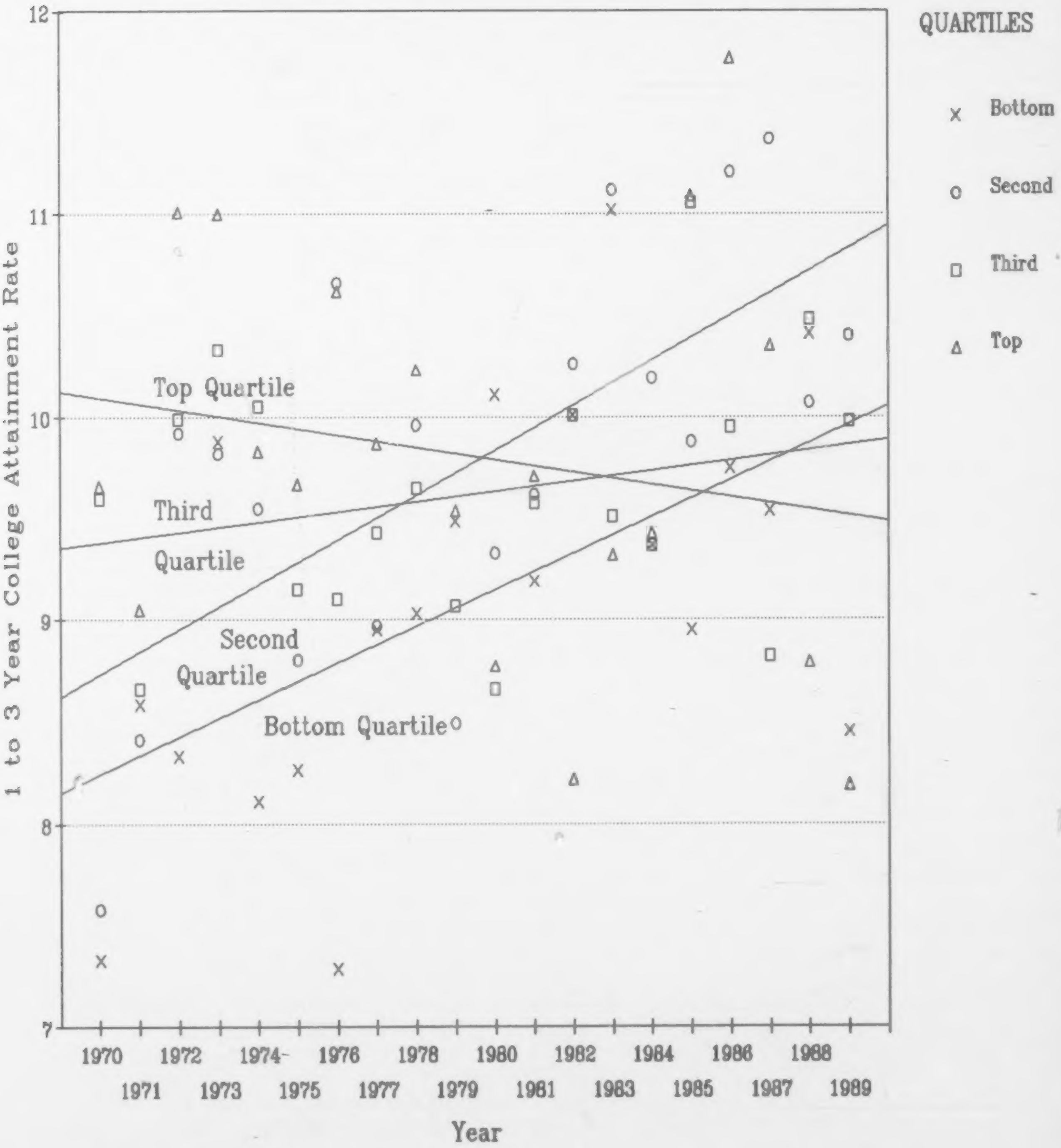


Source: Current Population Survey, Series P-20.

FIGURE 39

1 TO 3 YEARS COLLEGE ATTAINMENT RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED HIGH SCHOOL GRADUATES AGE 18 TO 24

1970 TO 1989



Source: Current Population Survey, Series P-20.

In Figure 40 we have plotted the proportion of unmarried 18 to 24 year old high school graduates that report having completed four or more years of college by family income quartiles. The pattern is typical of what has been presented previously in this paper: the rates are lowest for those from lowest family income backgrounds, and highest for those from highest family income backgrounds. Over the last two decades, these rates have remained relatively flat for the bottom two quartiles of family income, nearly doubled for the third quartile, and increased significantly for the top quartile, especially during the 1980s.

The difference between the rates for the top and bottom family income quartiles is shown in Figure 41. During the 1970s, the gap in baccalaureate degree attainment narrowed somewhat. But beginning in 1981, this gap widened rapidly and had nearly tripled by 1985.

Enrollment by Institutional Control

For unmarried 18 to 24 year olds still enrolled in college, we can examine their college enrollment by institutional control from the Current Population Survey data. One of the most important characteristics distinguishing public and private higher educational institutions is their tuition charges to students. In 1986-87, for example, the average annual tuition charged by public four year institutions was $1414, compared to $6658 in private four year institutions (Snyder, 1989). Thus, our ability to analyze college enrollments by both institutional control and family income backgrounds offers insight into the ability of individuals from different family income backgrounds to bridge the price gap between public and private higher education.

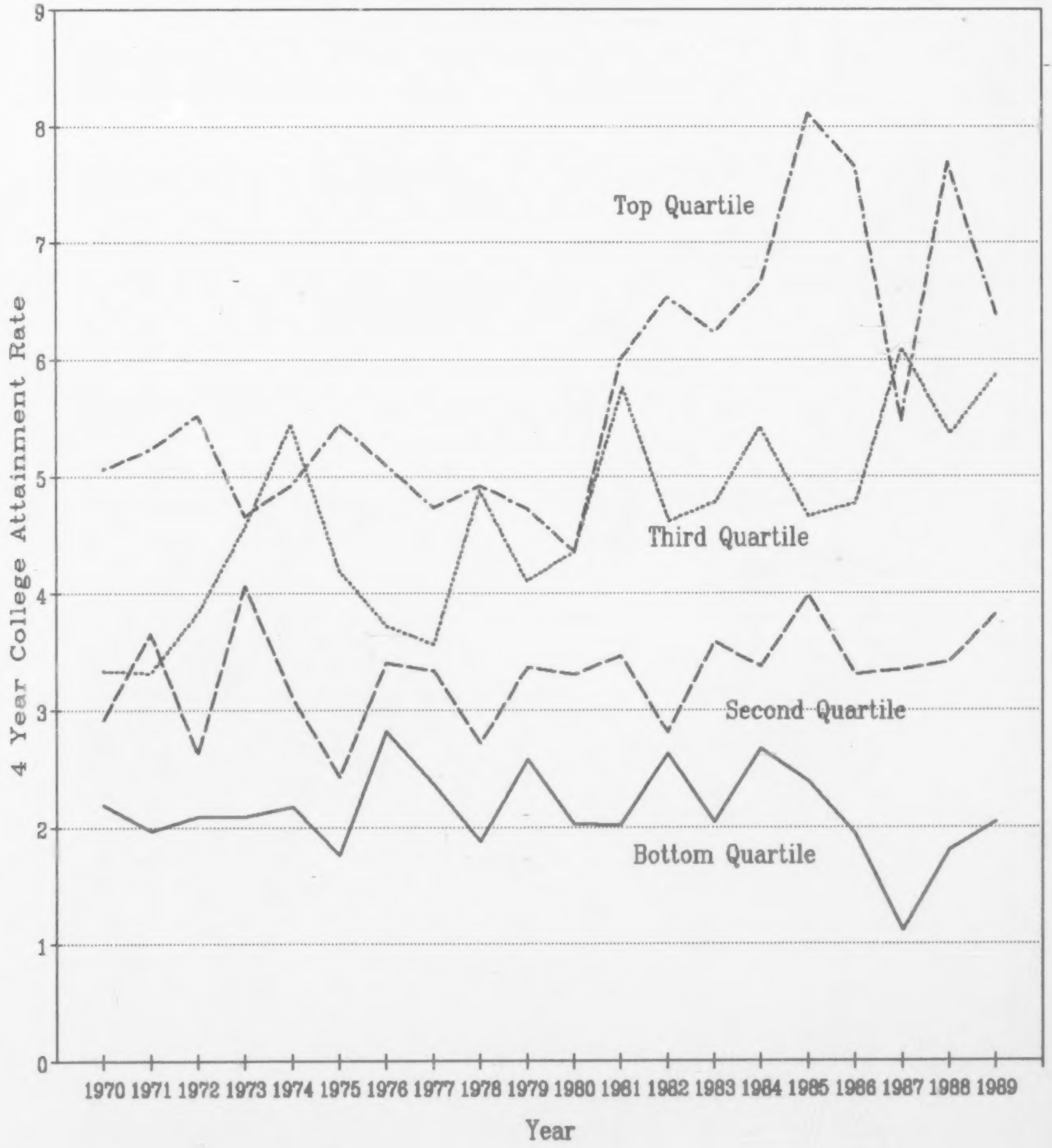
The Census Bureau, however, cautions about the quality of this data. In conversations with the authors, Census Bureau staff have expressed reservations about the reliability of data collected from individuals regarding institutional control. Apparently, some respondents are unsure whether their institution is public or private. Thus, the Census Bureau has chosen not to report these data for four of the last twenty years, including 1970, 1980, 1987, and 1988.

Although we cannot verify the accuracy of the Census Bureau's survey data, we have compared the public/private enrollment estimates for 18 to 24 year olds published by the Census Bureau (based on samples of individuals) with similarly defined enrollment data reported by the Department of Education (based on institutional reports). These aggregate results suggest a high degree of comparability. For example, the Department of Education reports that 77 percent of the college students age 18 to 24 in 1987 were enrolled in public institutions. The Census Bureau reported that 76 percent of the college students age 18 to 24 in 1986 were enrolled in public institutions, and 79 percent in 1989. Given the apparent comparability of these data, we proceeded with our analysis and report our results here.

Overall, public higher educational institutions enrolled 79 percent of the population of unmarried 18 to 24 year old college students in 1989. Since 1971 this proportion has ranged from a low of 74 percent in 1978 to the high recorded in 1989.

By family income quartiles, the public institutional share of higher educational enrollments for the last two decades is shown in Figure 42, and for private institutions in Figure 43. The most obvious pattern to these data is that over the last two decades public colleges have generally enrolled a larger share of the lowest family income college students than of the highest family income college students. For example, in 1989 public

FIGURE 40
4 YEAR COLLEGE ATTAINMENT RATES BY FAMILY INCOME QUARTILES FOR UNMARRIED HIGH SCHOOL GRADUATES AGE 18 TO 24
1970 TO 1989

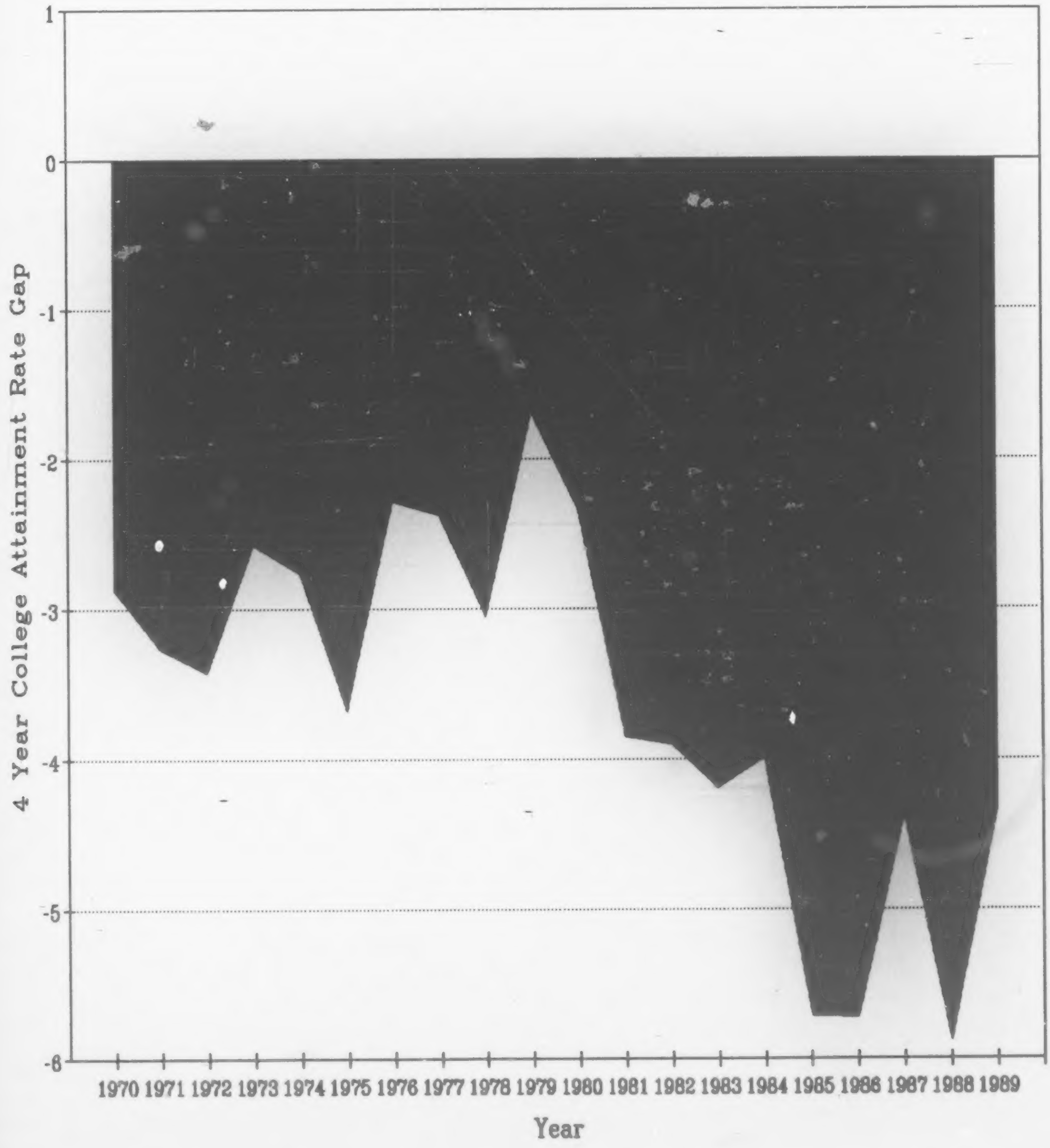


Source: Current Population Survey, Series P-20.

FIGURE 41

4 YEAR COLLEGE ATTAINMENT RATE GAP FOR BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED HIGH SCHOOL GRADUATES

1970 TO 1989

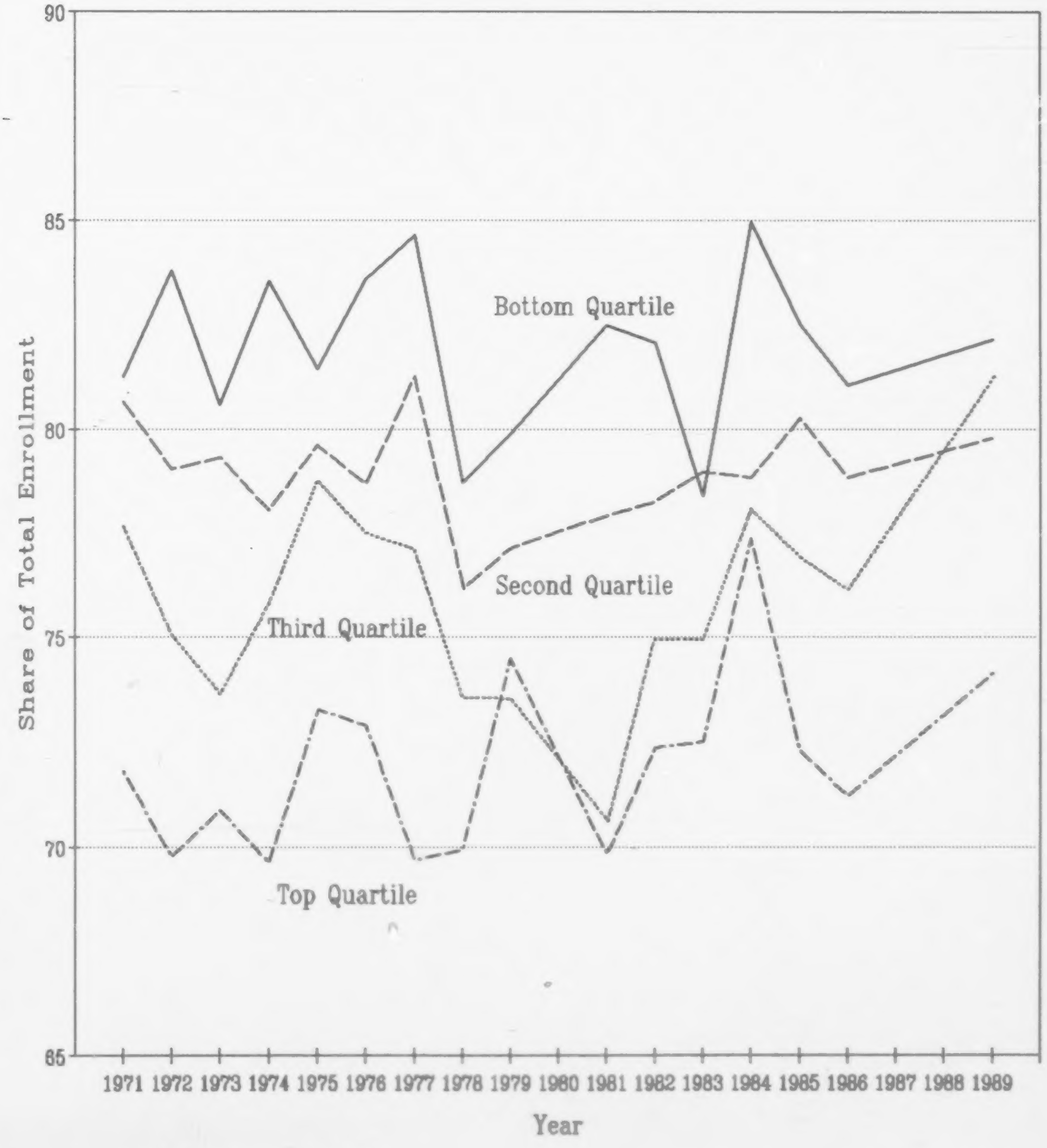


Source: Current Population Survey, Series P-20.

FIGURE 42

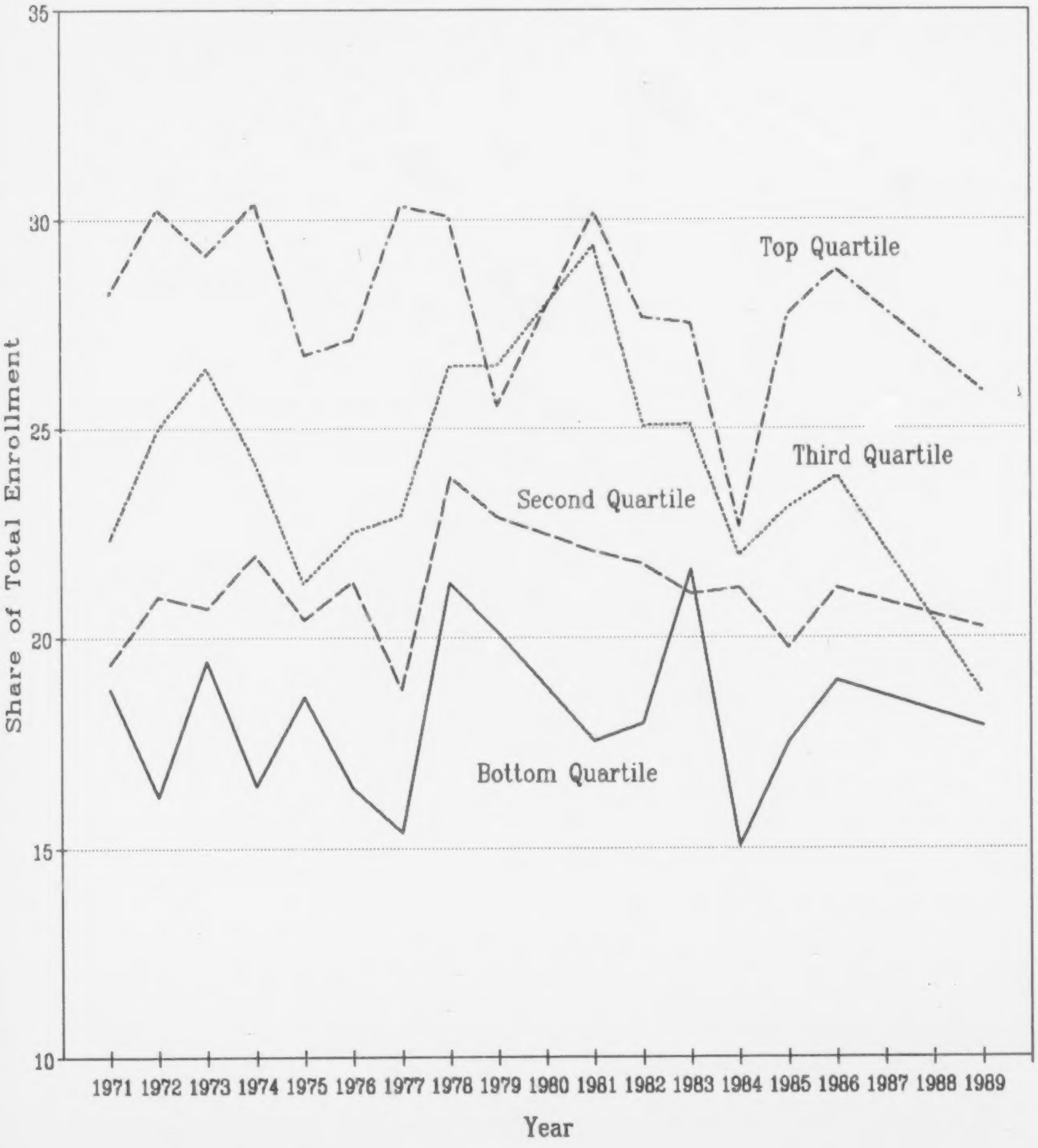
PUBLIC COLLEGE SHARE OF HIGHER EDUCATIONAL ENROLLMENTS BY FAMILY INCOME QUARTILES FOR UNMARRIED HIGH SCHOOL GRADUATES

1971 TO 1989



Source: Current Population Survey, Series P-20.

FIGURE 43
PRIVATE COLLEGE SHARE OF HIGHER EDUCATIONAL ENROLLMENTS BY FAMILY INCOME QUARTILES FOR UNMARRIED HIGH SCHOOL GRADUATES 1971 TO 1989



Source: Current Population Survey, Series P-20.

colleges enrolled 82 percent of the bottom quartile students, 80 percent from the second quartile, 81 percent from the third, and 74 percent from the top family income quartile. Similarly, private colleges were more likely to enroll students from the top family income quartile than they were from the bottom quartile.

But the picture is more interesting than this when trends are examined by family income quartiles. Public institutions over the last two decades have enrolled largely stable shares of unmarried 18 to 24 year olds from the bottom two quartiles of the family income distribution, but larger shares of students from the top two quartiles. Concomitantly, private institutions have lost enrollment shares from the top two family income quartiles. The shift appears to have been under way for most of the last two decades in the top family income quartile (where family incomes exceeded about $58,100 in 1989). But in the third quartile, where incomes ranged from $35,400 to $58,100 in 1989, the shift from private to public has occurred sharply since 1981. Prior to 1981, college enrollment in this income range was shifting from public to private, particularly between 1975 and 1981. This income interval may be especially responsive to pricing and financial aid policies of government and institutions.

Enrollment by Status

Students age 18 to 24 are more likely to attend college fulltime than are older students due to the absence of complicating features of an older person's life style, such as marriage, children, mortgages, car payments, etc. However, during the last two decades even 18 to 24 year olds have shifted somewhat from full-time enrollment toward part-time college study. The proportion of unmarried 18 to 24 year old college students that are carrying a full-time load of courses dropped from 92 percent in 1970 to 87 percent by 1980, and has remained near the 87 percent level through 1989 as shown in Figure 44.

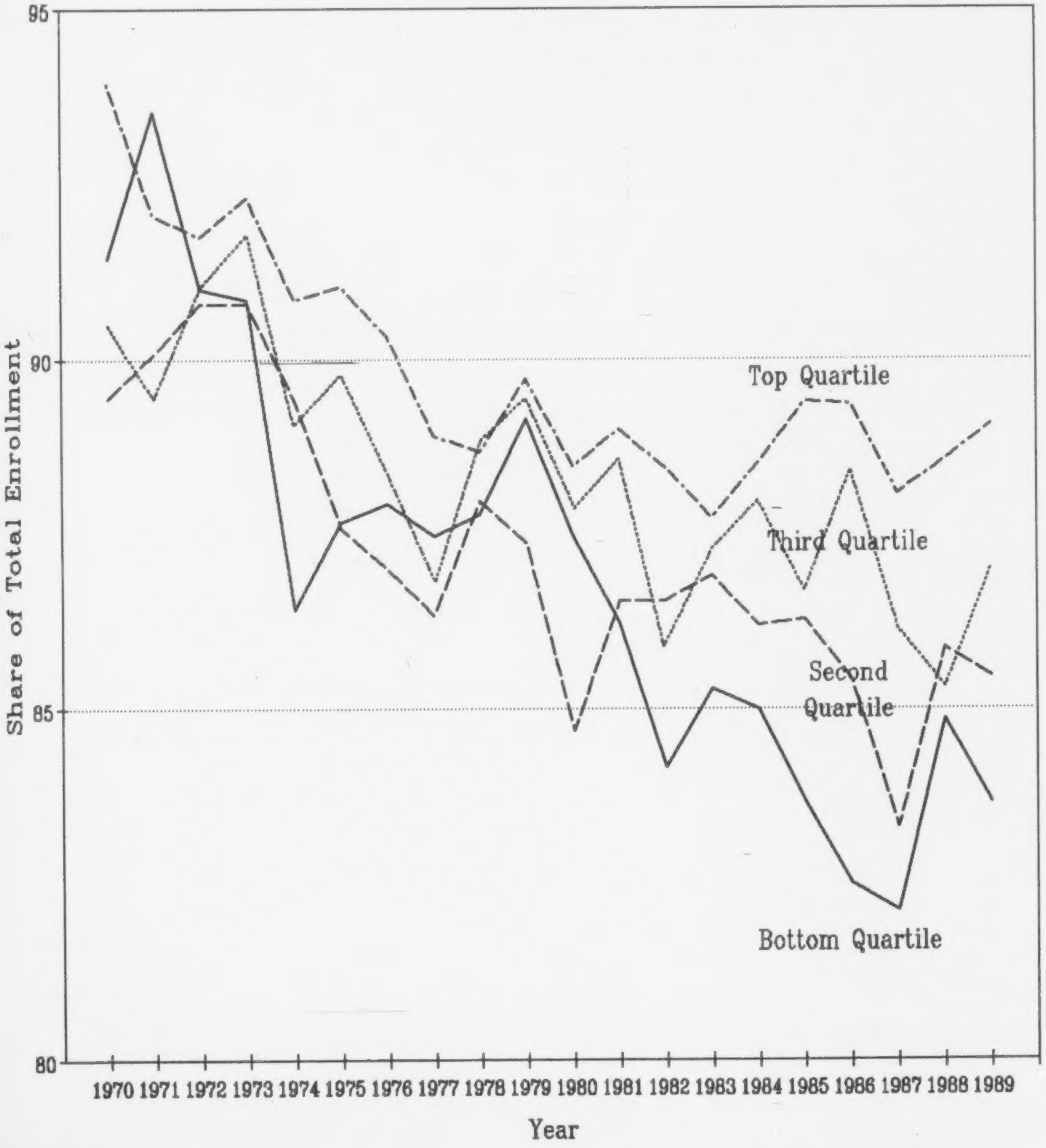
Of course these proportions vary by family income level. College students from the top quartile of the family income distribution are most likely to be enrolled full-time, and students from the bottom quartile are least likely to be enrolled full-time. Furthermore, over the last two decades, students from the bottom family income quartile have made the greatest shift from full-time to part-time study. Between 1970 and 1989, the proportion of college students from the top quartile of family income enrolled full-time dropped by 5 percent, while the proportion from the bottom quartile dropped by 8 percent.

Throughout the 1980s, college students from the bottom quartile of the family income distribution have been the group most likely to be part-time students. But during the 1970s this was not always the case: college students from the second and third quartiles were often the groups most likely to be enrolled in college part-time, as shown in Figure 45.

Summary of Findings

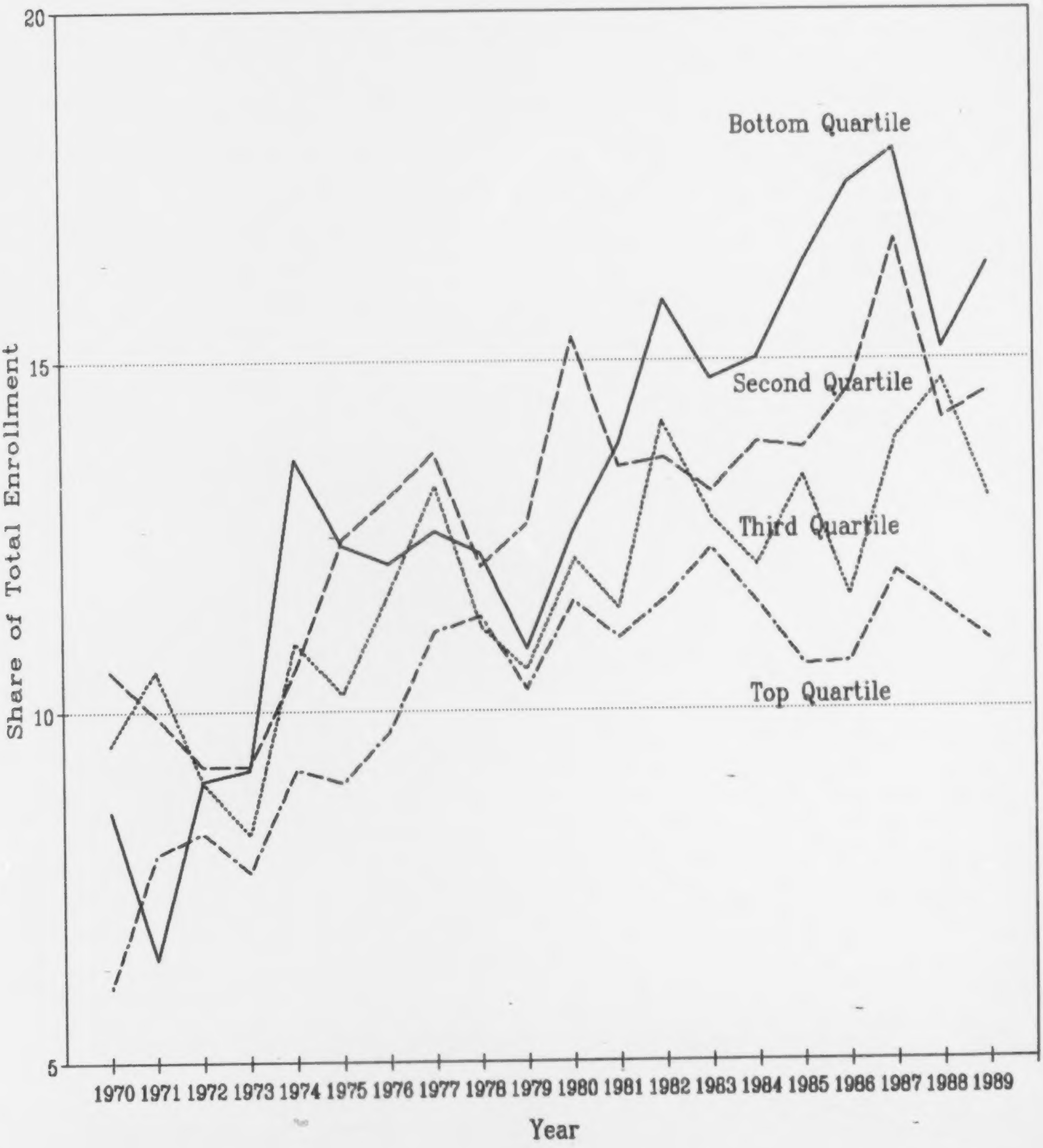
In this section we have described college participation behaviors of unmarried 18 to 24 year old high school graduates for the years between 1970 and 1989. In particular, we have made comparative descriptions of these behaviors between the four quartiles of unmarried high school graduate family income.

FIGURE 44
FULL TIME ENROLLMENT SHARE OF TOTAL ENROLLMENTS BY FAMILY INCOME QUARTILES FOR UNMARRIED HIGH SCHOOL GRADUATES
1970 TO 1989



Source: Current Population Survey, Series P-20.

FIGURE 45
PART TIME ENROLLMENT SHARE OF TOTAL ENROLLMENTS BY FAMILY INCOME QUARTILES FOR UNMARRIED HIGH SCHOOL GRADUATES
1970 TO 1989



Source: Current Population Survey, Series P-20.

In every dimension of higher educational participation, for every demographic dimension of the population, the data tell the same story:

> **The highest rates of higher educational participation are enjoyed by persons from the top quartile of family income, and the lowest rates of higher educational participation are experienced by those from the bottom quartile of family income. Students from intervening quartiles participate according to their family income quartile placement.**
>
> **Moreover, the differences in higher educational participation have been largely persistent over the last two decades. While notable improvements occurred during the 1970s for high school graduates from the bottom quartile of family income, the 1980s are characterized by deterioration in higher educational participation that exceeds the gains made during the 1970s in most cases. This finding holds for males, females, whites, and Hispanics. It holds for 18 to 24 year olds currently enrolled in college, those with 1 to 3 years of college experience, and those with 4 or more years of college. It holds for institutional choice between low tuition public and high tuition private institutions, and it holds for full time enrollment status.**

IV. Baccalaureate Degree Attainment

The third step on the path of education toward the life styles and opportunities accorded to the college educated in America is earning a bachelor's degree. Our data do not permit us to examine this question directly because dependent family members who earn a college degree often become independent of their parents upon graduation when they begin their careers. Therefore, we have used another data source--1980 High School and Beyond (HSB)--to determine bachelor's degree attainment by family income background for those who start college. We will use this data source, combined with our Current Population Survey data, to estimate baccalaureate degree attainment for the period of our study between 1970 and 1989.

High School and Beyond

The 1980 High School and Beyond data file contains extensive information on 1980 high school graduates. This cohort was followed up by the National Center for Education Statistics at periodic intervals to determine, among other things, their progress in higher education. We have examined a portion of these data with the assistance of NCES to determine the proportion of those who started college who had obtained a baccalaureate degree by the spring of 1986.

Baccalaureate degree attainment rates for the 1980 class ranged from 20.8 percent of those from family incomes of less than $7000 per year (in 1980), to 46.2 percent of those from families with annual incomes of $38,000 or more. These data are shown in Figure 46.

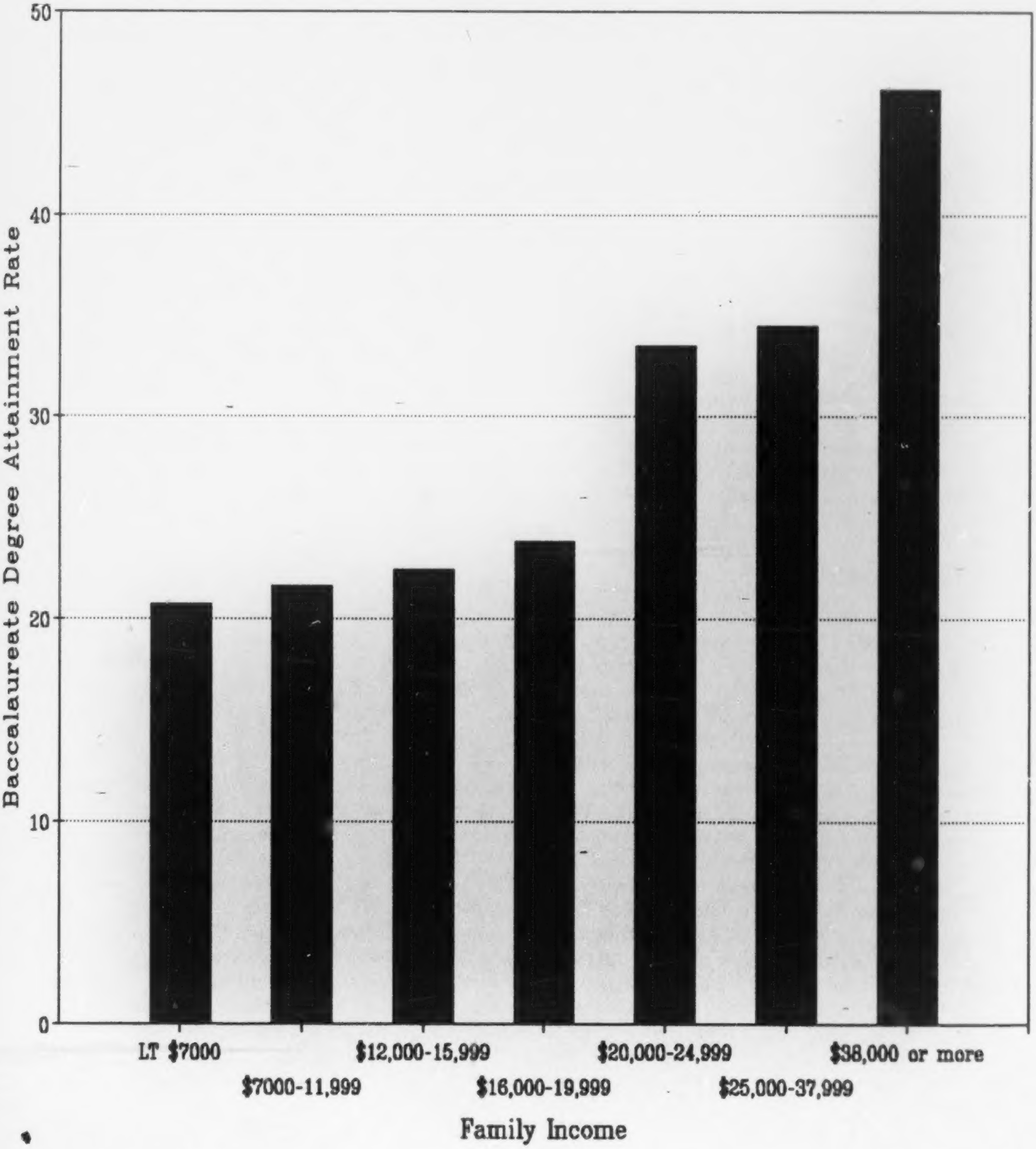
Adjustments to CPS Data

We have used the HSB degree attainment rate by age 24 data to estimate the rates at which unmarried 18 to 24 year old college students are likely to earn a baccalaureate degree by the time they are 24 years old over the twenty year time span of this study. The adjustment involves recalculating the 4 years of more of college data by family income quartiles reported in Appendix Table 26 and plotted in Figure 47 using the HSB data for the 1980 reference year. Within each family income quartile for 1980, the ratio of rates of baccalaureate degrees earned from HSB to the rate of four years of more of college calculated in Table 26 was computed. This ratio was then used to estimate chances of earning a baccalaureate degree by age 24 for 1970 to 1979 and 1981 to 1989 by multiplying the ratio for the income quartile by the 4 years or more college attainment rate.

The results are shown in Figure 47. The 4 year degree attainment rates are strongly related to family income backgrounds from high school. We estimate that a person who goes to college and comes from the bottom quartile of family income had about a 22 percent chance to earn a bachelor's degree by age 24 in 1989. From the second quartile the chance was about 27 percent. From the third quartile the chance was 46 percent, and from the top quartile the chance was about 68 percent. Figure 47 also shows increases in the rates at which unmarried high school graduates could expect to earn a baccalaureate degree by age 24 in the top two quartiles of family income, a largely flat trend in the second quartile, and some decline, especially in the latter 1980s, for those from the bottom quartile.

Although our data describe estimates of 4 year degree attainment by age 24, and these estimates involve fairly risky extrapolations, they are in fact based on behavioral data. They are also consistent with expectations of educational progress based on more

FIGURE 46
BACCALAUREATE DEGREE ATTAINMENT RATES BY FAMILY INCOME FOR 1980 HIGH SCHOOL GRADUATES WHO STARTED COLLEGE
SPRING, 1986

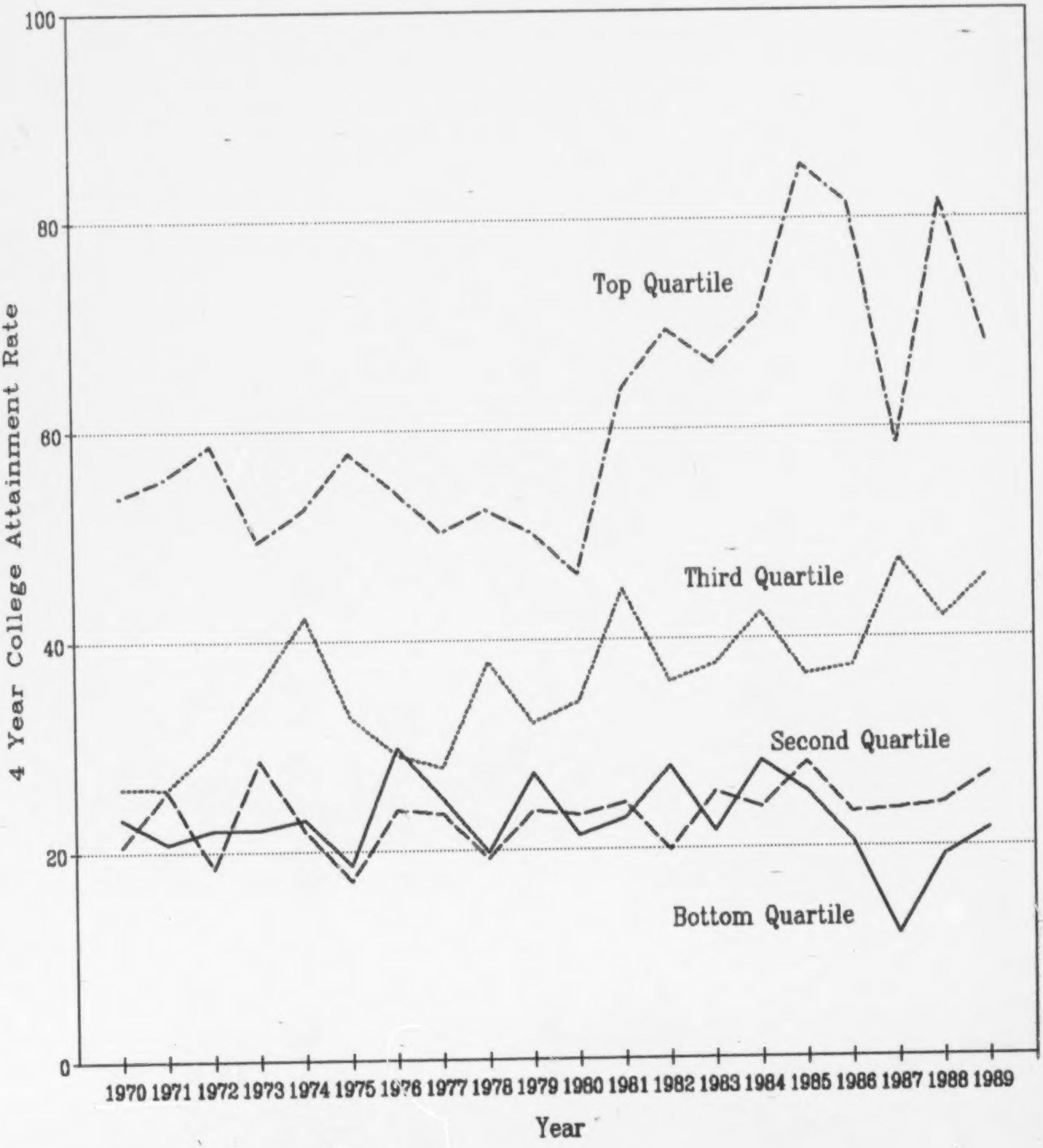


Source: 1980 High School and Beyond.

FIGURE 47

ESTIMATED 4 YEAR COLLEGE ATTAINMENT RATES BY AGE 24 BY FAMILY INCOME QUARTILES FOR UNMARRIED COLLEGE STUDENTS

1970 TO 1989



Source: Current Population Survey and High School and Beyond.

solid data from the Current Population Survey on high school graduation and college participation by family income levels. Thus, despite the tenuousness of the estimation technique, we can have some confidence that they reflect trends and patterns present in the population.

If in fact they hold up under further examination, they offer evidence that suggests the efforts of public policy to facilitate the degree attainment component of educational opportunity for those from low family income backgrounds has not been successful. The influences of the labor market, military draft, and social equity movements of women and blacks prevail over governmental programs and laws focused on providing educational opportunity for economically disadvantaged populations.

V. Summary

During the last twenty-five years, the federal government has sought to expand educational opportunity for economically disadvantaged populations. In 1965 laws were enacted for elementary and secondary education and for higher education that sought to compensate for economic disadvantage through extensive funding support targeted on low income populations. The federal government continues to support these laws by massive annual appropriations and to endorse the public policy they reflect by periodic review and revision of the legislation in which the policy is embodied.

During this same period of time, the family income that measures our standard of living has stagnated. However, many families have prospered during this period, while other families have lost ground. The demarcation line between them has been educational attainment, and the opportunities for economic advancement are increasingly determined by educational attainment.

In this study we have examined high school graduation rates and college participation rates by the family income backgrounds of 18 to 24 year olds. This study has been a bottom-line assessment of the performance of these programs regarding educational attainment of children and young adults between 1970 and 1989.

If one were looking for dramatic improvements in educational attainment resulting from the federal investment in elementary, secondary, and higher education, one would be disappointed. On the other hand, if one were looking for signs of progress in educational attainment among low income populations, one could find them. But the progress has been uneven: in some important situations, progress in one area has been offset by losses in another, and gains during one period have been erased in following periods. With respect to the broad federal policy objectives of enhancing educational attainment by students from low family income backgrounds, the record generally is a sorry one.

Chances for College for Students from Low Family Income Backgrounds

The CPS data permit us to calculate the chances of enrolling in college for a student from the bottom quartile of the family income distribution (incomes below about $20,000 in 1989). We calculate these chances by multiplying the high school graduation rate times the college participation rate. We have done so for the population of unmarried 18 to 24 year olds from the bottom quartile of the family income distribution for each year between 1970 and 1989. We have also done so for males, females, whites, blacks and Hispanics. The results are shown in Figures 48 through 50.

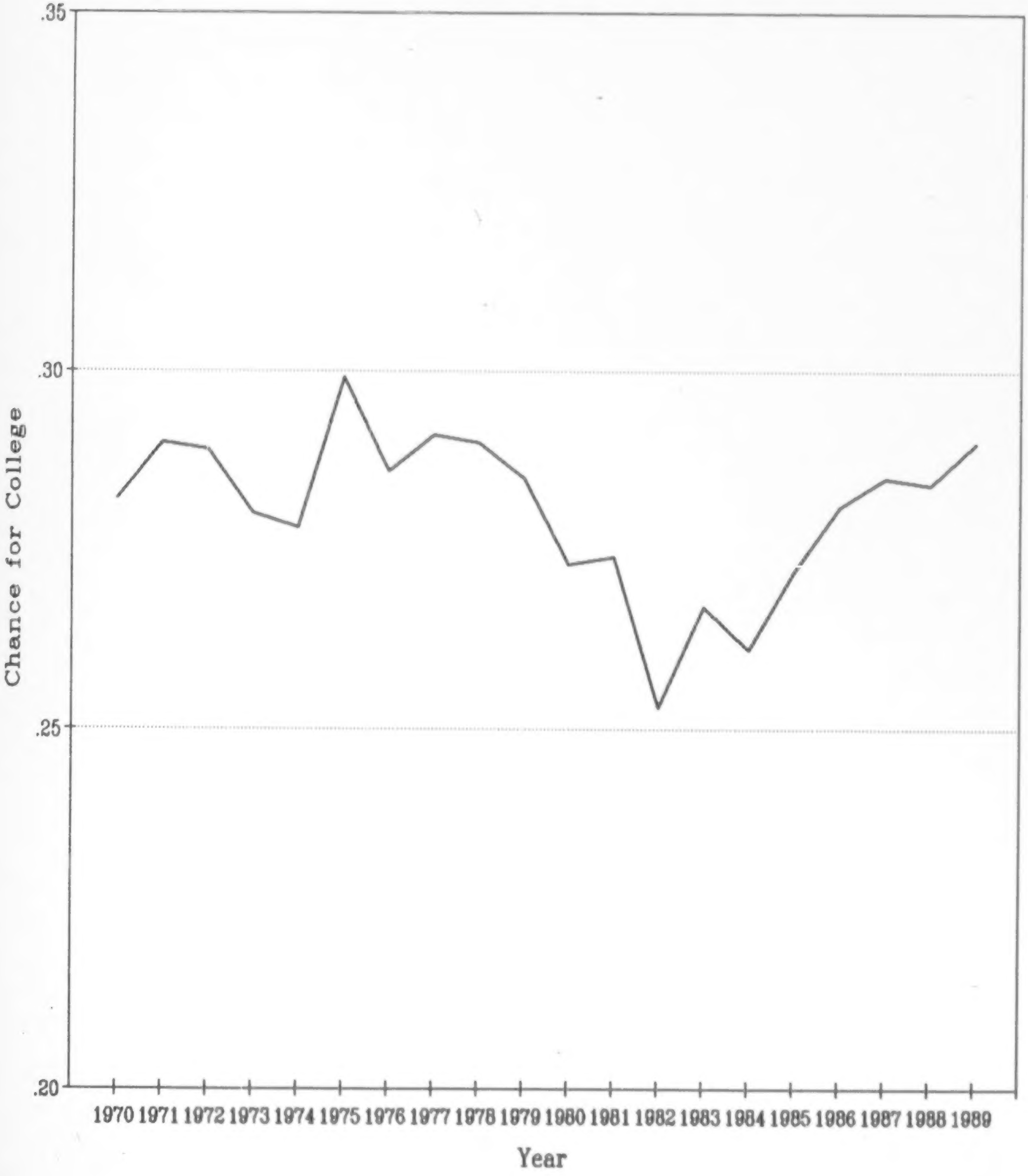
Overall, the unmarried 18 to 24 year old from the bottom quartile of the family income distribution made almost no progress in both graduating from high school and going on to college between 1970 and 1989. In 1970 the student's chances were 28.2 percent, and by 1989--following two decades of massive federal investment in education for children and young adults from low income families-the student's chances had increased to only 29.0 percent. Out of the population of 4,393,000 from the bottom family income quartile in 1989, the increase in the rate between 1970 and 1989 added just 35,000 to those going on to college after high school.

As Figure 48 clearly shows, chances for college for students from low family income backgrounds dropped sharply between 1979 and 1982--a period when the national economy was in recession. Since 1982--during a period of national economic expansion--the loss has been completely recovered.

FIGURE 48

CHANCE FOR COLLEGE FROM BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED 18 TO 24 YEAR OLDS

1970 TO 1989



The chances for college by gender are shown in Figure 49. These results reveal what the aggregate data in Figure 48 have obscured. The chances for college for females from low family income backgrounds have increased during the last twenty years, while the chances for college for males have decreased. These changes have been substantial and have offset each other in the combined data in Figure 48. For males the decline in chances for college occurred between 1972 and 1980, followed by a small but continuing recovery. For females increased chances for college occurred between 1970 and 1979, followed by a decline through 1984, then followed again by a sharp increase. In the second half of the 1980s, the chances for college for unmarried females age 18 to 24 were at all time highs.

The chances for college by race/ethnicity are shown in Figure 50. For low family income whites, chances for college have averaged around 30 percent over the last two decades, with substantial fluctuations in between. College chances for low family income blacks increased sharply between 1970 and 1976, but have remained stable since then at about 25 percent. The chance for college for low income Hispanics has fluctuated during the 1970s and 1980s, but now stands near the low end of this range at about 20 percent. Among the racial/ethnic subpopulations, only blacks showed much improvement in chances for college, and that improvement ended fifteen years ago.

Chances of Earning a Baccalaureate Degree

At every step in the progression toward a baccalaureate degree from college, students from low family income backgrounds suffer. First they suffer from low high school graduation rates compared to students from high family income backgrounds. Students from low family income backgrounds who manage to graduate from high school are less likely to go on to college than are those who come from high family income backgrounds. Finally, those from low family income backgrounds who do go on to college are less likely to earn a baccalaureate degree within six years of high school graduation than are those from high family income backgrounds.

These conditional probabilities may be cumulated with the result being one's chances of earning a baccalaureate degree by age 24. We have calculated these probabilities based on high school graduation and college participation data developed in this study, and have estimated baccalaureate degree attainment rates developed from the 1980 High School and Beyond study and data developed for the years of this study. The results are presented in Figure 51.

In 1989 a young adult's chances of earning a baccalaureate degree from college were roughly 6 percent if their family income was in the bottom quartile of the family income distribution (incomes below $20,000). A young adult's chances doubled to about 12 percent if their family income was in the second quartile ($20,000 to $35,000). Chances doubled again to about 27 percent if they came from the third quartile of family income ($35,000 to $58,000). And, if the young adult's family income was in the top quartile of family income (above $58,000 per year), their chances of earning a baccalaureate degree doubled yet again to about 55 percent. A young adult from the top quartile of family income had eight to thirteen times greater chance of earning a baccalaureate degree than did a young adult whose family income was in the bottom quartile of the family income distribution.

Over the last twenty years, this disparity of attainment has worsened. The disparity diminished during the 1970s, but largely because bachelor's degree attainment in the top family income quartile declined. Then, during the 1980s the disparity increased suddenly and sharply, again largely because of changes in persistence and attainment in the the top quartile of family income. Clearly, young adults from the third quartile have made steady

FIGURE 49

CHANCE FOR COLLEGE FROM BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED 18 TO 24 YEAR OLDS BY GENDER 1970 TO 1989

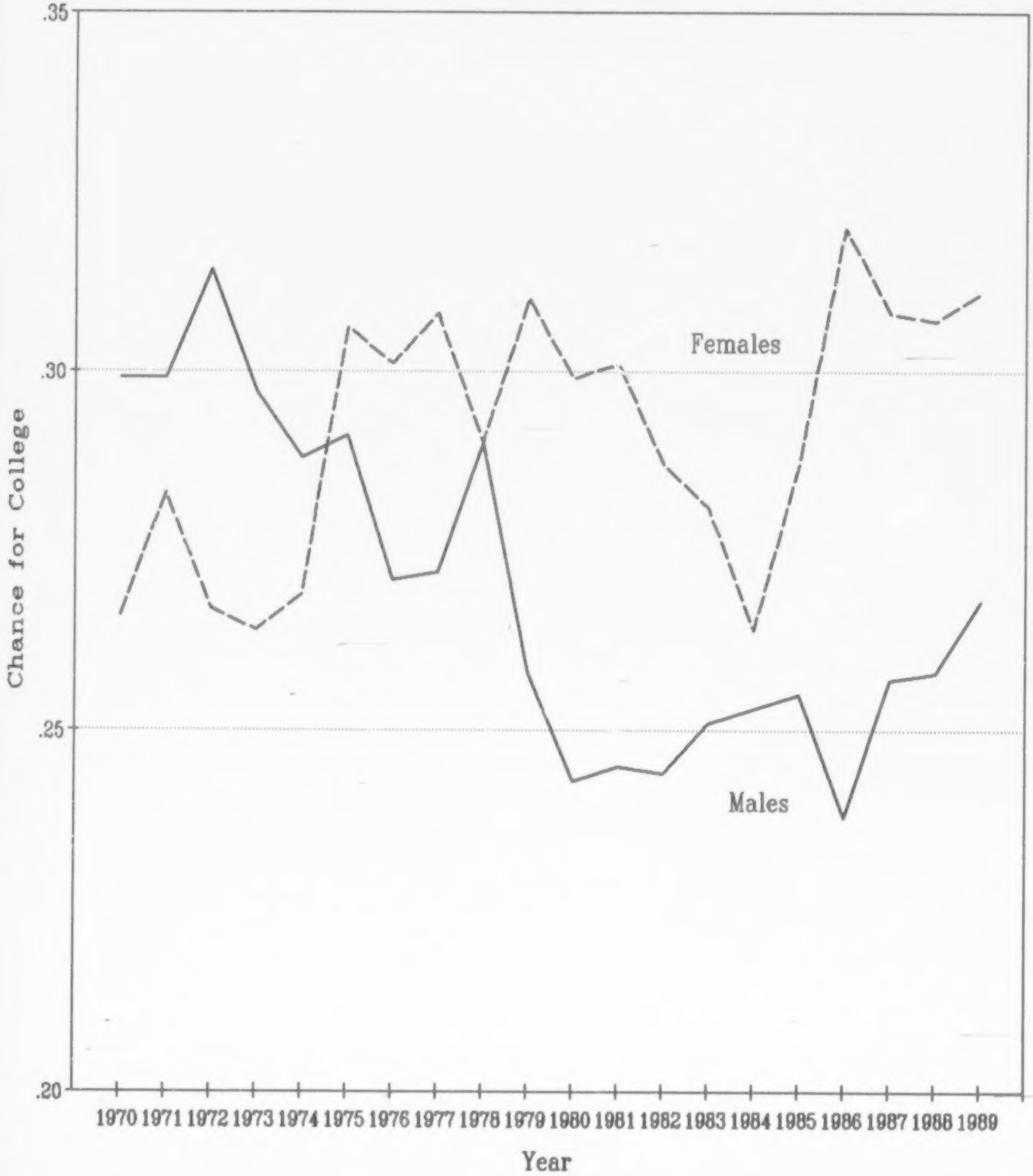


FIGURE 50
CHANCE FOR COLLEGE FROM BOTTOM QUARTILE OF FAMILY INCOME FOR UNMARRIED 18 TO 24 YEAR OLDS BY RACE/ETHNICITY
1970 TO 1989

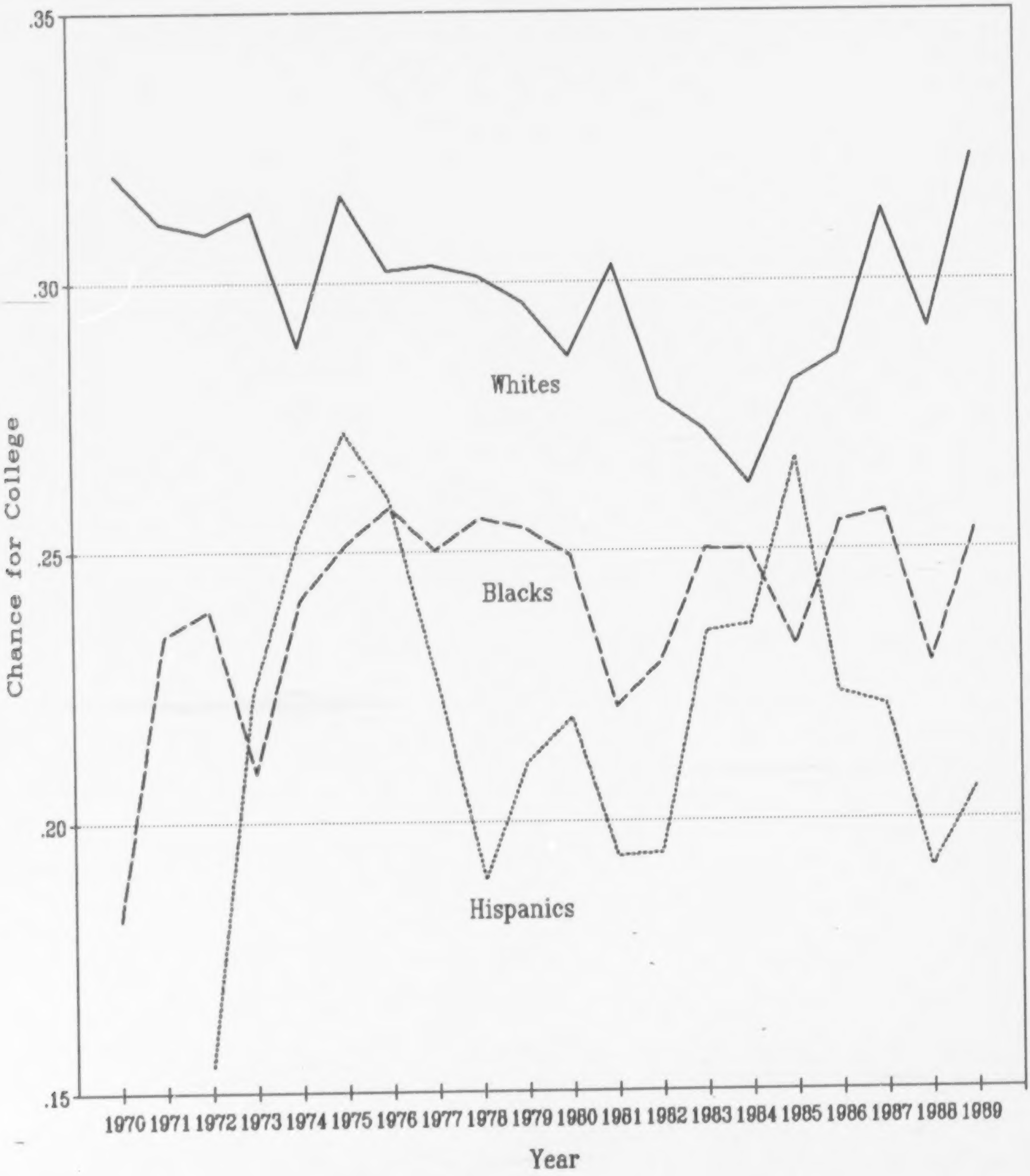
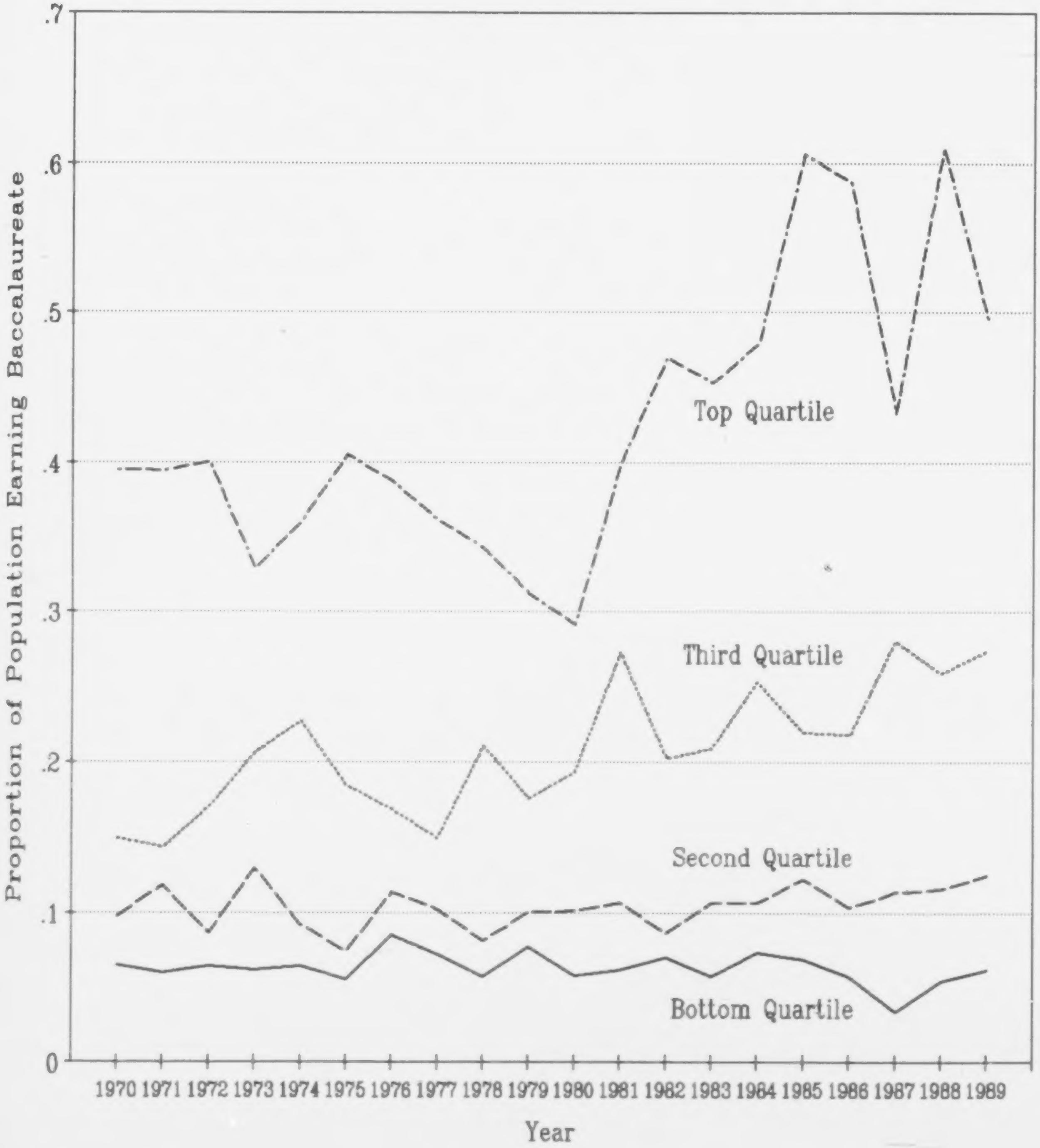


FIGURE 51
ESTIMATED CHANCES FOR A BACCALAUREATE DEGREE BY AGE 24 BY FAMILY INCOME QUARTILE
1970 TO 1989



Source: Data developed in tables, plus estimates.

and substantial progress toward baccalaureate degree attainment during the last twenty years, and one may even see some improvement in the chances for young adults from the second quartile, particularly during the 1980s. But over the last two decades, the chances that a young adult from the bottom family income quartile would earn a bachelor's degree have probably declined absolutely and certainly relative to the top three quartiles.

Numbers of Affected Young Adults

For many reasons the story contained in the numbers has been told in rates--rates of high school graduation, rates of college participation, and rates of degree attainment. But these rates and the form of their presentation for this report obscure the magnitudes of the populations whose educational attainments are the focus of the study.

In 1989 there were 20,482,000 18 to 24 year olds in the civilian, noninstitutional population of the United States. Of these, 5,258,000 were not high school graduates, 6,583,000 were high school graduates who had not participated in college, 5,911,000 were currently enrolled in college, 1,873,000 had left college with one to three years of college study, and 874,000 had left college and completed four years or more of college. The final picture of their educational attainment remains to be taken because many are actively engaged in education and many more will return to the educational system to enhance their educational attainment. For such reasons the years 18 through 24 are particularly dynamic and difficult to capture and report as we have tried to do in this study.

But 18 to 24 is also the time when most people who will earn a baccalaureate degree will do so. Activities and responsibilities of later adult life are relatively minimal when people are still young adults, and higher education is a timely investment in one's self because the lifetime benefits of college are experienced over the longest possible life span.

With this in mind, we have sought in this study to determine who profits from educational investment in young people. The answer--in Figure 58--is clearly those born into families from highest family income levels. In fact nearly half of those earning a baccalaureate degree by the time they are 24 will have come from the top quartile of family income of high school graduates--those families that in 1989 had incomes greater than $58,000 per year. This quartile contains just 22 percent of the population of unmarried 18 to 24 year old high school graduates. Out of 1000 baccalaureate degree holders by age 24, we estimate that 88 came from the bottom quartile, 139 from the second quartile, 284 from the third, and 489 from the top quartile of family income. This is the end product of secondary and higher educational experiences that at every step knock those from lowest family income backgrounds out of the track of educational progress toward the baccalaureate degree.

The Performance of Public Policy

Educational attainment has a high positive correlation with just about any imaginable conception of the best of life's opportunities available in America. In recognition of both the public and private benefits of education, America is partially if not largely defined by its commitment to the education of its citizens, and in recent decades by the equality of opportunity of that commitment. Not just through federal programs, but through educational reform at the state level and through judicial intervention, improvements in educational opportunity for economically disadvantaged populations have become an expensive focus of public policy.

The evidence presented in this report presents a largely unsettling assessment of the performance of public policy over the last two decades. Particularly below the median family income, in the bottom two quartiles of the family incomes of unmarried 18 to 24 year old high school graduates, evidence of success is scanty. It is so limited that we may summarize it in a few brief lines:

- **Despite becoming notably poorer during the last two decades, high school graduation rates in the bottom quartile of family income actually increased appreciably between 1984 and 1987. Despite decreasing in 1988 and 1989, they remain above the rates for each year between 1970 and 1983.**
- **High school graduation rates for females in the bottom quartile of the family income distribution increased appreciably between 1970 and 1979.**
- **High school graduation rates for blacks from the bottom, second, and third quartiles of family income made notable progress over the last two decades. The greatest increase occurred in the lowest family income quartile.**
- **Between 1970 and 1979, college participation rates declined less for high school graduates from the bottom quartile of the family income distribution than they did for those from the top three family income quartiles. Thus, during the 1970s, the college participation rate gap closed somewhat for bottom quartile high school graduates.**
- **Between 1984 and 1989 the college participation rate for high school graduates from the bottom quartile of family income has increased, following 15 years of near steady decline.**

Somehow one would hope that the billions of dollars invested in educational opportunity for economically disadvantaged populations could have produced a longer list of more substantial gains.

APPENDIX

TABLE

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TABLE 1
Marital Status of Population
Age 18 to 24 By Race/Ethnicity and Gender
1970 to 1989

(Numbers in thousands)

Race/Ethnicity and Gender			1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total																						
Total	Population		20632	21613	22160	22522	22530	22959	23380	23336	23313	23356	23541	24388	24366	24291	23283	22442	21699	21273	20851	20482
	Married		9088	9299	9306	9694	9525	9126	8778	8527	8184	8032	7692	7718	7402	7117	6670	6263	5958	5672	5052	5069
	Married Rate(%)		44.05	43.03	41.99	43.04	42.28	39.75	37.54	36.54	35.10	34.39	32.67	31.65	30.35	29.30	28.65	27.91	27.46	26.66	24.23	24.75
Male	Population		9498	10071	10447	10690	10673	10915	11108	11166	11107	11159	11300	11748	11830	11757	11310	10831	10488	10215	10010	9896
	Married		3377	3497	3533	3700	3612	3432	3200	3207	3065	3022	2913	2869	2695	2529	2367	2189	2168	2082	1718	1730
	Married Rate(%)		35.55	34.72	33.82	34.61	33.84	31.44	28.81	28.72	27.60	27.08	25.78	24.42	22.78	21.51	20.93	20.21	20.67	20.38	17.16	17.48
Female	Population		11134	11542	11713	11832	11857	12044	12272	12170	12206	12197	12241	12640	12556	12534	11973	11611	11211	11058	10841	10586
	Married		5711	5802	5773	5994	5913	5694	5578	5320	5119	5010	4779	4849	4707	4588	4303	4074	3790	3590	3334	3339
	Married Rate(%)		51.29	50.27	49.29	50.66	49.87	47.28	45.45	43.71	41.94	41.08	39.04	38.36	37.49	36.60	35.94	35.09	33.80	32.47	30.75	31.54
White																						
Total	Population		17900	18737	19155	19322	19356	19666	20003	19912	19774	19726	19863	20406	20260	20196	19182	18554	17791	17411	17086	16701
	Married		8198	8433	8418	8706	8547	8185	8028	7765	7519	7327	7071	7070	6673	6526	6038	5540	5354	5085	4532	4570
	Married Rate(%)		45.80	45.01	43.95	45.06	44.16	41.62	40.13	39.00	38.02	37.14	35.60	36.65	32.94	32.31	31.48	29.86	30.09	29.21	26.52	27.36
Male	Population		8274	8780	9074	9228	9267	9462	9616	9656	9536	9546	9697	9930	9887	9851	9398	9092	8671	8471	8289	81.40
	Married		3024	3164	3177	3310	3247	3077	2925	2933	2824	2771	2691	2652	2444	2336	2140	1952	1952	1874	1519	1559
	Married Rate(%)		36.55	36.04	37.74	35.87	35.04	32.52	30.42	30.37	29.61	29.03	27.75	26.71	24.72	23.71	22.77	21.47	22.51	22.12	18.33	19.15
Female	Population		9626	9957	10081	10094	10089	10204	10387	10256	10238	10180	10166	10476	10373	10345	9784	9462	9120	8940	8797	8561
	Married		5174	5269	5241	5396	5300	5108	5103	4832	4695	4556	4380	4418	4229	4190	3898	3588	3402	3211	3013	3011
	Married Rate(%)		53.75	52.92	51.99	53.46	52.53	50.06	49.13	47.11	45.86	44.75	43.08	42.17	40.77	40.50	39.84	37.92	37.30	35.91	34.25	35.17

Race/Ethnicity and Gender		1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Black																					
Total	Population	2502	2637	2755	2892	2828	2890	2987	3038	3099	3152	3186	3380	3509	3433	3426	3263	3236	3156	3057	3093
	Married	813	790	812	883	838	785	643	657	568	558	495	505	573	405	444	537	443	429	412	363
	Married Rate(%)	32.49	29.96	29.47	30.53	29.63	27.16	21.53	21.63	18.33	17.70	18.09	14.94	16.33	11.80	12.96	16.46	13.69	13.59	13.48	11.74
Male	Population	1122	1185	1258	1320	1260	1275	1310	1329	1368	1387	1394	1520	1620	1578	1581	1459	1505	1413	1379	1405
	Married	334	317	338	362	332	302	241	248	211	198	188	176	205	139	169	184	170	172	168	123
	Married Rate(%)	29.77	26.75	26.87	27.42	26.35	23.69	18.40	18.66	15.42	14.28	13.49	11.58	12.65	8.81	10.69	12.61	11.30	12.17	12.18	8.75
Female	Population	1380	1452	1497	1572	1568	1615	1677	1709	1731	1765	1792	1860	1889	1855	1845	1804	1731	1743	1678	1688
	Married	479	473	474	521	506	483	402	409	357	360	307	329	368	266	275	353	273	257	244	240
	Married Rate(%)	34.71	32.58	31.66	33.14	32.27	29.91	23.97	23.93	20.62	20.40	17.13	17.69	19.48	14.34	14.07	19.57	15.77	14.74	14.54	14.22
Other Race																					
Total	Population	230	239	250	308	346	403	390	386	440	478	492	602	617	662	675	625	672	706	708	688
	Married	77	76	76	105	140	156	107	105	97	147	126	143	156	186	188	186	161	158	108	136
	Married Rate(%)	33.48	31.80	30.40	34.09	40.46	38.71	27.44	27.20	22.05	30.75	25.61	23.75	25.28	28.10	27.85	29.76	23.96	22.38	15.25	19.77
Male	Population	102	106	115	142	146	178	182	181	203	226	209	298	323	328	331	280	312	331	342	351
	Married	19	16	18	28	33	53	34	26	30	53	34	41	46	54	58	53	46	36	31	48
	Married Rate(%)	18.63	15.09	15.65	19.72	22.60	29.78	18.68	14.36	14.78	23.45	16.27	13.76	14.24	16.46	17.52	18.93	14.74	10.88	9.06	13.68
Female	Population	128	133	135	166	200	225	208	205	237	252	283	304	294	334	344	345	360	375	366	337
	Married	58	60	58	77	107	103	73	79	67	94	92	102	110	132	130	133	115	122	77	88
	Married Rate(%)	43.31	45.11	42.96	46.39	53.50	47.78	35.10	38.54	28.27	37.30	32.51	33.55	37.41	39.52	37.79	38.55	31.94	32.53	21.04	26.11
Hispanic																					
Total	Population			1217	1183	1380	1312	1405	1429	1448	1507	1677	1813	1809	1830	1755	1907	2081	2164	2230	2347
	Married			553	540	574	527	594	583	645	651	603	645	659	637	592	596	670	676	691	797
	Married Rate(%)			45.44	45.65	41.59	40.17	42.28	40.80	44.54	43.20	35.96	35.58	36.43	34.81	33.73	31.25	32.20	31.24	30.99	33.96
Male	Population			543	562	639	597	617	636	641	690	792	819	840	845	801	935	1059	1085	1135	1146
	Married			213	218	232	202	202	226	251	244	222	238	243	228	205	250	263	278	261	332
	Married Rate(%)			39.23	38.79	36.31	33.84	32.74	35.53	39.16	35.36	28.03	29.06	28.93	26.98	25.59	26.74	24.83	25.62	23.00	28.97
Female	Population			674	621	741	715	788	793	807	817	885	994	969	985	954	972	1022	1079	1095	1201
	Married			340	322	342	325	392	357	394	407	381	407	416	409	387	346	407	398	430	465
	Married Rate(%)			50.45	51.85	46.15	45.45	49.75	45.02	48.82	49.82	43.05	40.95	42.93	41.52	40.57	35.60	39.82	36.89	39.27	38.72

Source: Current Population Survey, Series P-20.

TABLE 2
High School Graduation for Unmarried Age 18 to 24 By Family Income 1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Population	10636	11401	11811	11632	11869	12517	13112	13342	13508	13821	14718	15694	16037	16363	15675	15462	15268	14899	14891	14187
High School Graduates	8500	9024	9476	9420	9452	10060	10604	10676	10856	11044	11840	12564	12892	13084	12784	12680	12456	12136	12084	11420
Graduation Rate(%)	79.92	79.15	80.23	80.98	79.64	80.37	80.87	80.02	80.37	79.91	80.45	80.06	80.39	79.96	81.56	82.01	81.58	81.46	81.15	80.50
Family Income Quartiles																				
Bottom Quartile																				
Population	3449	3644	3725	3663	3728	3923	4134	4221	4214	4325	4565	4929	5106	5104	4857	4751	4657	4606	4705	4393
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
Graduation Rate(%)	61.62	61.92	63.61	64.29	63.38	64.12	64.12	63.22	64.39	63.83	64.83	63.72	63.12	64.08	65.81	66.72	66.86	65.87	64.21	64.99
Difference From Top Quartile	-31.46	-30.81	-29.13	-28.14	-29.48	-29.19	-29.42	-30.93	-27.97	-28.39	-27.03	-27.62	-30.38	-28.71	-27.64	-27.56	-26.45	-28.86	-29.99	-28.16
Second Quartile																				
Population	2536	2766	2839	2795	2931	3104	3158	3274	3305	3414	3624	3851	3906	4059	3874	3838	3827	3674	3606	3494
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
Graduation Rate(%)	83.80	81.58	83.45	84.25	80.62	81.03	83.93	81.50	82.11	80.87	81.67	81.56	82.52	80.58	82.49	82.60	81.33	82.58	83.78	81.71
Difference From Top Quartile	-9.28	-11.15	-9.29	-8.18	-12.24	-12.28	-9.61	-12.65	-10.25	-11.35	-10.19	-9.78	-10.98	-12.21	-10.96	-11.68	-11.98	-12.15	-10.42	-11.44
Third Quartile																				
Population	2368	2557	2693	2627	2665	2795	2986	3013	3051	3089	3307	3475	3578	3674	3524	3511	3447	3416	3373	3235
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
Graduation Rate(%)	89.74	88.22	87.99	89.65	88.67	89.99	88.77	88.57	88.94	89.38	89.49	90.39	90.08	89.04	90.70	90.28	90.32	88.81	89.56	88.24
Difference From Top Quartile	-3.34	-4.51	-4.75	-2.78	-4.19	-3.32	-4.77	-5.58	-3.42	-2.84	-2.37	-.95	-3.42	-3.75	-2.75	-4.00	-2.99	-5.92	-4.64	-4.91
Top Quartile																				
Population	2283	2433	2555	2548	2544	2695	2834	2834	2938	2994	3222	3439	3447	3525	3420	3362	3337	3203	3207	3065
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
Graduation Rate(%)	93.08	92.73	92.74	92.43	92.86	93.31	93.54	94.15	92.36	92.22	91.86	91.34	93.50	92.79	93.45	94.28	93.31	94.73	94.20	93.15

Source: Current Population Survey, Series P-20.

TABLE 3
Male High School Graduation Rates for Unmarried Age 18 to 24 By Family Income 1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Population	5624	6058	6327	6339	6440	6767	7079	7182	7204	7311	7781	8348	8589	8753	8421	8226	8075	7742	7813	7525
High School Graduates	4395	4698	4966	5050	5021	5342	5553	5568	5654	5614	6082	6442	6664	6739	6659	6581	6405	6154	6141	5877
Graduation Rate(%)	78.15	77.55	78.49	79.67	77.97	78.94	78.44	77.53	78.48	76.79	78.16	77.17	77.59	76.99	79.08	80.00	79.32	79.49	78.60	78.10
Family Income Quartiles																				
Bottom Quartile																				
Population	1689	1748	1798	1801	1807	1891	1993	2036	1963	2087	2153	2345	2508	2462	2299	2235	2209	2127	2209	2136
High School Graduates	1019	1035	1108	1127	1112	1148	1189	1200	1209	1205	1315	1375	1462	1462	1411	1431	1385	1335	1334	1306
Graduation Rate(%)	60.32	59.22	61.60	62.55	61.52	60.69	59.65	58.96	61.60	57.76	61.05	58.65	58.27	59.37	61.38	64.04	62.71	62.74	60.39	61.12
Difference From Top Quartile (%)	-30.72	-31.55	-29.21	-28.57	-29.51	-32.11	-32.80	-33.65	-28.29	-32.73	-28.68	-30.13	-34.06	-31.83	-30.20	-28.79	-29.44	-30.90	-31.42	-30.57
Second Quartile																				
Population	1367	1517	1616	1565	1676	1755	1770	1791	1829	1816	1982	2100	2178	2296	2203	2173	2145	2015	2018	1930
High School Graduates	1098	1193	1288	1267	1293	1370	1412	1383	1444	1397	1550	1627	1688	1726	1731	1709	1657	1568	1615	1504
Graduation Rate(%)	80.27	78.64	79.71	80.95	77.15	78.06	79.79	77.26	78.94	76.94	78.18	77.50	77.51	75.19	78.56	78.67	77.24	77.81	80.03	77.96
Difference From Top Quartile (%)	-10.77	-12.13	-11.10	-10.17	-13.88	-14.74	-12.66	-15.35	-10.95	-13.55	-11.55	-11.28	-14.82	-16.01	-13.02	-14.16	-14.91	-15.83	-11.78	-13.73
Third Quartile																				
Population	1302	1433	1497	1508	1513	1590	1698	1710	1740	1703	1841	1962	1980	2069	1987	1926	1864	1848	1869	1777
High School Graduates	1126	1235	1284	1320	1301	1404	1457	1461	1498	1469	1600	1717	1738	1794	1748	1685	1652	1611	1616	1525
Graduation Rate(%)	86.45	86.21	85.80	87.56	86.05	88.28	85.76	85.46	86.10	86.28	86.93	87.51	87.78	86.73	87.97	87.48	88.61	87.17	86.44	85.80
Difference From Top Quartile (%)	-4.59	-4.56	-5.01	-3.56	-4.98	-4.52	-6.69	-7.15	-3.79	-4.21	-2.80	-1.27	-4.55	-4.47	-3.61	-5.35	-3.54	-6.47	-5.37	-5.89
Top Quartile																				
Population	1266	1360	1416	1466	1445	1530	1617	1645	1672	1705	1802	1942	1923	1926	1932	1892	1857	1751	1717	1682
High School Graduates	1153	1234	1286	1335	1315	1420	1495	1524	1503	1543	1617	1724	1776	1757	1769	1756	1711	1640	1576	1542
Graduation Rate(%)	91.04	90.77	90.81	91.12	91.03	92.80	92.45	92.61	89.89	90.49	89.73	88.78	92.33	91.20	91.58	92.83	92.15	93.64	91.81	91.69

Source: Current Population Survey, Series P-20.

TABLE 4
Female High School Graduation Rates for Unmarried Age 18 to 24 By Family Income 1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Population	5011	5342	5484	5293	5429	5750	6033	6160	6303	6509	6936	7345	7447	7609	7253	7237	7195	7157	7080	6662
High School Graduates	4106	4327	4511	4370	4431	4718	5050	5105	5199	5428	5756	6122	6228	6345	6125	6099	6050	5982	5945	5543
Graduation Rate(%)	81.94	81.00	82.26	82.56	81.62	82.05	83.71	82.87	82.48	83.39	82.99	83.35	83.63	83.39	84.45	84.28	84.09	83.58	83.97	83.20
Family Income Quartiles																				
Bottom Quartile																				
Population	1759	1896	1926	1862	1921	2032	2140	2185	2251	2238	2411	2584	2598	2642	2558	2516	2448	2479	2496	2257
High School Graduates	1106	1221	1261	1228	1251	1366	1461	1468	1504	1556	1644	1766	1761	1809	1785	1739	1729	1699	1687	1549
Graduation Rate(%)	62.87	64.41	65.47	65.96	65.12	67.23	68.25	67.20	66.79	69.50	68.19	68.32	67.80	68.47	69.78	69.09	70.61	68.55	67.58	68.66
Difference From Top Quartile (%)	-32.76	-30.81	-29.66	-28.23	-30.16	-26.79	-26.75	-29.07	-28.82	-25.00	-26.69	-26.35	-27.16	-26.27	-26.08	-27.10	-24.17	-27.50	-29.39	-26.28
Second Quartile																				
Population	1169	1248	1223	1230	1255	1348	1389	1483	1476	1597	1642	1751	1727	1763	1670	1665	1684	1659	1588	1564
High School Graduates	1028	1063	1077	1089	1070	1145	1239	1285	1270	1363	1410	1514	1535	1545	1465	1461	1457	1466	1406	1351
Graduation Rate(%)	87.94	85.15	88.07	88.51	85.26	84.92	89.26	86.61	86.07	85.34	85.90	86.43	88.84	87.60	87.69	87.73	86.54	88.35	88.54	86.35
Difference From Top Quartile (%)	-7.69	-10.07	-7.06	-5.68	-10.02	-9.10	-5.74	-9.66	-9.54	-9.16	-8.98	-8.24	-6.12	-7.14	-8.17	-8.46	-8.24	-7.70	-8.43	-8.57
Third Quartile																				
Population	1066	1124	1196	1119	1152	1204	1288	1303	1311	1386	1466	1514	1598	1605	1537	1585	1543	1568	1504	1458
High School Graduates	999	1021	1089	1034	1061	1111	1194	1207	1215	1292	1357	1424	1485	1477	1448	1484	1461	1423	1406	1330
Graduation Rate(%)	93.75	90.79	91.10	92.41	92.10	92.26	92.74	92.69	92.72	93.19	92.58	94.10	92.94	92.02	94.23	93.63	94.71	90.76	93.45	91.23
Difference From Top Quartile (%)	-1.88	-4.43	-4.03	-1.78	-3.18	-1.76	-2.26	-3.58	-2.89	-1.31	-2.30	-0.57	-2.02	-2.72	-1.63	-2.56	-0.07	-5.29	-3.52	-3.69
Top Quartile																				
Population	1017	1073	1139	1082	1100	1165	1216	1189	1265	1288	1417	1497	1524	1598	1488	1470	1480	1452	1491	1383
High School Graduates	972	1021	1083	1019	1049	1096	1155	1145	1210	1218	1344	1417	1447	1514	1427	1414	1403	1394	1446	1313
Graduation Rate(%)	95.63	95.22	95.13	94.19	95.28	94.02	95.00	96.27	95.61	94.50	94.88	94.67	94.96	94.74	95.86	96.19	94.78	96.05	96.97	94.92

Source: Current Population Survey, Series P-20.

TABLE 5
White High School Graduation for Unmarried Age 18 to 24 By Family Income 1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Population	8925	9519	9794	9587	9833	10362	10713	10860	10900	11180	11820	12528	12756	12982	12289	12433	12030	11455	11767	11026
High School Graduates	7469	7860	8160	8079	8144	8700	8989	9021	9091	9292	9838	10359	10617	10767	10331	10451	10035	9591	9774	9235
Graduation Rate(%)	83.69	82.57	83.32	84.27	82.82	83.96	83.91	83.07	83.40	83.11	83.23	82.69	83.23	82.94	84.07	84.06	83.42	83.73	83.06	83.76
Family Income Quartiles																				
Bottom Quartile																				
Population	2358	2405	2431	2405	2399	2471	2620	2612	2552	2686	2734	2926	3131	3023	2907	3033	2859	2668	2973	2588
High School Graduates	1571	1572	1617	1634	1607	1707	1763	1732	1718	1816	1864	1934	2045	1976	1931	2057	1914	1763	1894	1788
Graduation Rate(%)	66.61	65.38	66.51	67.94	67.07	69.07	67.30	66.31	67.32	67.61	68.18	66.11	65.32	65.37	66.42	67.82	66.96	66.08	63.72	69.10
Difference From Top Quartile (%)	-27.02	-28.12	-26.99	-25.15	-25.84	-24.37	-26.35	-27.99	-25.41	-24.74	-23.91	-25.45	-28.17	-27.68	-27.31	-26.34	-26.58	-28.68	-30.58	-24.30
Second Quartile																				
Population	2200	2427	2498	2416	2531	2677	2660	2778	2778	2823	2991	3205	3201	3350	3044	3112	3023	2865	2938	2773
High School Graduates	1876	2005	2104	2073	2069	2204	2268	2280	2306	2317	2438	2603	2657	2748	2537	2584	2458	2379	2484	2287
Graduation Rate(%)	85.26	82.61	84.22	85.79	81.73	82.33	85.28	82.06	83.02	82.08	81.52	81.22	83.01	82.04	83.35	83.04	81.30	83.05	84.55	82.48
Difference From Top Quartile (%)	-8.37	-10.89	-9.28	-7.30	-11.18	-11.11	-8.37	-12.24	-9.71	-10.27	-10.57	-10.34	-10.48	-11.01	-10.38	-11.12	-12.24	-11.71	-9.75	-10.92
Third Quartile																				
Population	2167	2373	2466	2394	2460	2610	2726	2765	2799	2826	3066	3208	3195	3319	3182	3112	3008	3004	2953	2837
High School Graduates	1962	2119	2196	2164	2197	2356	2423	2457	2497	2531	2748	2902	2896	2981	2905	2820	2726	2684	2657	2519
Graduation Rate(%)	90.53	89.30	89.06	90.41	89.29	90.27	88.89	88.87	89.21	89.55	89.61	90.45	90.63	89.82	91.30	90.63	90.62	89.34	89.97	88.76
Difference From Top Quartile (%)	-3.10	-4.20	-4.44	-2.68	-3.62	-3.17	-4.76	-5.43	-3.52	-2.80	-2.48	-1.11	-2.86	-3.23	-2.43	-3.53	-2.92	-5.42	-4.33	-4.64
Top Quartile																				
Population	2199	2314	2399	2372	2442	2604	2708	2705	2772	2845	3029	3189	3230	3291	3156	3176	3140	2918	2904	2828
High School Graduates	2059	2164	2243	2208	2269	2433	2536	2551	2570	2627	2789	2920	3019	3062	2958	2991	2937	2765	2738	2641
Graduation Rate(%)	93.63	93.50	93.50	93.09	92.91	93.44	93.65	94.30	92.73	92.35	92.09	91.56	93.49	93.05	93.73	94.16	93.54	94.76	94.30	93.40

Source: Current Population Survey, Series P-20.

TABLE 6
Black High School Graduation for Unmarried Age 18 to 24 By Family Income 1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Population	1568	1737	1847	1868	1852	1948	2156	2231	2309	2367	2563	2714	2829	2930	2923	2634	2739	2619	2351	2501
High School Graduates	908	1046	1185	1195	1174	1195	1418	1436	1517	1529	1730	1853	1920	1984	2110	1910	2008	1905	1644	1815
Graduation Rate(%)	57.91	60.22	64.16	63.97	63.39	61.34	65.77	64.37	65.70	64.60	67.50	68.28	67.87	67.71	72.19	72.51	73.31	72.74	69.93	72.57
Family Income Quartiles																				
Bottom Quartile																				
Population	1035	1171	1216	1200	1244	1369	1417	1513	1541	1536	1711	1849	1835	1905	1755	1572	1576	1475	1354	1453
High School Graduates	512	635	700	684	695	748	823	860	908	872	1025	1117	1092	1190	1142	1012	1044	964	792	957
Graduation Rate(%)	49.45	54.20	57.55	57.01	55.85	54.63	58.06	56.85	58.91	56.77	59.90	60.43	59.51	62.47	65.09	64.37	66.23	65.34	58.47	65.85
Difference From Top Quartile (%)	-24.85	-20.20	-21.10	-24.26	-36.09	-32.62	-31.94	-32.20	-27.67	-33.14	-25.32	-29.51	-33.07	-27.13	-26.66	-32.72	-20.08	-27.75	-34.82	-19.94
Second Quartile																				
Population	289	304	311	332	357	371	436	438	465	508	545	531	602	619	716	658	703	666	528	618
High School Graduates	206	219	236	243	266	267	331	335	353	374	443	434	482	451	571	531	569	525	438	498
Graduation Rate(%)	71.21	72.08	75.98	73.21	74.52	72.06	75.85	76.52	75.95	73.62	81.34	81.79	80.12	72.92	79.72	80.72	80.99	78.83	82.99	80.47
Difference From Top Quartile (%)	-3.09	-2.32	-2.67	-8.06	-17.42	-15.19	-14.15	-12.53	-10.63	-16.29	-3.88	-8.15	-12.46	-16.68	-12.03	-16.37	-5.32	-14.26	-10.30	-5.32
Third Quartile																				
Population	169	161	202	196	182	136	210	198	186	218	180	177	289	260	265	300	340	310	319	300
High School Graduates	134	117	156	154	149	117	181	168	155	189	154	160	249	212	225	265	292	260	274	249
Graduation Rate(%)	79.17	72.73	77.30	78.57	81.85	86.04	86.19	84.69	83.29	86.57	85.39	90.40	86.22	81.44	84.98	88.33	85.97	83.82	85.99	83.12
Difference From Top Quartile (%)	+4.87	-1.67	-1.35	-2.70	-10.09	-1.21	-3.81	-4.36	-3.29	-3.34	+0.17	+0.46	-6.36	-8.16	-6.77	-8.76	-0.34	-9.27	-7.30	-2.67
Top Quartile																				
Population	74	101	118	141	69	72	92	82	117	105	127	158	104	146	187	104	120	168	150	130
High School Graduates	55	75	93	114	63	63	83	73	101	94	108	142	96	131	172	101	104	156	140	111
Graduation Rate(%)	74.30	74.40	78.65	81.27	91.94	87.25	90.00	89.05	86.58	89.91	85.22	89.94	92.58	89.60	91.75	97.09	86.31	93.09	93.29	85.79

Source: Current Population Survey, Series P-20.

TABLE 7
Other Race High School Graduation for Unmarried Age 18 to 24 By Family Income 1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Population	143	145	170	177	184	207	243	251	299	274	335	452	452	451	463	395	499	825	773	660
High School Graduates	123	118	131	146	134	165	197	219	248	223	272	352	355	333	343	319	413	640	666	370
Participation Rate(%)	86.01	81.38	77.06	82.49	72.83	79.71	81.07	87.25	82.94	81.39	81.19	77.88	78.54	73.84	74.08	80.76	82.77	77.58	86.16	56.06
Family Income Quartiles																				
Bottom Quartile																				
Population	56	68	78	58	85	83	97	96	121	103	120	154	140	176	195	146	222	463	378	352
High School Graduates	42	49	52	37	61	60	65	77	88	73	71	90	86	105	123	101	156	307	335	110
Participation Rate(%)	75.00	67.65	66.67	63.79	71.76	72.29	67.01	80.21	72.73	70.87	59.17	58.44	61.43	59.66	63.08	69.18	70.27	66.31	88.62	31.25
Difference From Top Quartile (%)	-25.00	-26.79	-20.17	-30.50	-22.18	-27.71	-27.11	-15.53	-15.03	-20.04	-27.43	-27.43	-34.15	-28.98	-22.63	-25.94	-24.54	-30.27	-4.84	-65.01
Second Quartile																				
Population	47	35	30	47	43	56	62	58	62	83	88	115	103	90	114	68	101	143	140	103
High School Graduates	43	32	29	39	28	44	52	54	55	70	79	104	84	72	88	55	87	130	99	70
Participation Rate(%)	91.49	91.43	96.67	82.98	65.12	78.57	83.87	93.10	88.71	84.34	89.77	90.43	81.55	80.00	77.19	80.88	86.14	90.91	70.71	67.96
Difference From Top Quartile (%)	-8.51	-3.01	+9.83	-11.31	-28.82	-21.43	-10.25	-2.64	+0.95	-6.57	-5.68	-4.56	-14.03	-8.64	-8.52	-14.24	-8.67	-5.67	-22.75	-28.30
Third Quartile																				
Population	32	23	25	37	23	49	50	50	66	45	61	90	94	95	77	99	99	102	101	98
High School Graduates	29	20	17	37	17	42	47	44	62	41	58	79	78	78	66	85	96	90	90	89
Participation Rate(%)	90.63	86.96	68.00	100.00	73.91	95.92	94.00	88.00	93.94	91.11	95.08	87.78	82.98	82.11	85.71	85.86	96.97	88.24	89.11	90.82
Difference From Top Quartile (%)	-9.37	-7.48	-18.84	+5.71	-20.03	-4.08	-0.12	-7.74	+6.18	+0.20	-0.37	+1.91	-12.60	-6.53	0.00	-9.26	+2.16	-8.34	-4.35	-5.44
Top Quartile																				
Population	10	18	38	35	33	19	34	47	49	44	66	92	113	88	77	82	77	117	153	107
High School Graduates	10	17	33	33	31	19	32	45	43	40	63	79	108	78	66	78	73	113	143	103
Participation Rate(%)	100.00	94.44	86.84	94.29	93.94	100.00	94.12	95.74	87.76	90.91	95.45	85.87	95.58	88.64	85.71	95.12	94.81	96.58	93.46	96.26

Source: Current Population Survey, Series P-20.

TABLE 8
Hispanic High School Graduation Rates for Unmarried Age 18 to 24 By Family Income
1972 to 1989

(Numbers in thousands)

Total	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Population	626	599	770	731	720	757	714	781	1015	1113	1089	1144	1111	1282	1395	1443	1423	1357
High School Graduates	338	366	440	446	460	451	408	485	589	645	674	686	722	826	892	913	859	835
Graduation Rate(%)	53.99	61.10	57.14	61.01	63.89	59.58	57.14	62.10	58.03	57.95	61.89	59.97	64.99	64.43	63.94	63.27	60.37	61.53
Family Income Quartiles																		
Bottom Quartile																		
Population	371	342	411	383	399	433	427	401	499	543	599	583	563	651	735	751	730	698
High School Graduates	157	165	192	179	204	217	196	209	234	254	291	280	295	362	398	395	337	318
Graduation Rate(%)	42.30	48.22	46.72	46.72	51.17	50.08	45.87	52.12	46.87	46.74	48.60	48.05	52.40	55.56	54.16	52.57	46.18	45.48
Difference From Top Quartile (%)	-47.91	-33.27	-27.40	-35.13	-37.65	-33.21	-40.60	-35.37	-42.38	-36.53	-35.85	-38.88	-36.23	-29.66	-39.79	-41.53	-33.32	-39.65
Second Quartile																		
Population	145	148	205	197	155	166	174	224	301	342	265	304	272	350	410	434	431	361
High School Graduates	95	111	137	142	117	113	119	144	183	209	200	196	184	237	273	295	314	271
Graduation Rate(%)	65.41	75.18	66.80	72.04	75.33	68.03	68.45	64.23	60.70	61.25	75.52	64.50	67.61	67.64	66.60	67.94	72.78	75.25
Difference From Top Quartile (%)	-24.80	-6.31	-7.32	-9.81	-13.49	-15.26	-18.02	-23.26	-28.55	-22.02	-8.93	-22.43	-21.02	-17.58	-27.35	-26.16	-6.72	-9.88
Third Quartile																		
Population	74	72	93	73	105	99	76	80	128	130	140	159	154	163	163	179	202	194
High School Graduates	55	59	67	60	84	72	61	66	95	101	111	125	134	127	138	149	160	157
Graduation Rate(%)	74.20	81.51	71.86	82.67	79.83	72.91	80.43	82.15	74.22	77.76	79.23	78.85	86.99	78.02	84.66	83.39	79.40	80.82
Difference From Top Quartile (%)	-16.01	+0.02	-2.26	+0.82	-8.99	-10.38	-6.04	-5.34	-15.03	-5.51	-5.22	-8.08	-1.64	-7.20	-9.29	-10.71	-0.10	-4.31
Top Quartile																		
Population	35	37	61	78	61	59	37	75	86	98	85	99	122	117	87	79	60	104
High School Graduates	32	30	45	64	54	49	32	66	77	82	72	86	108	100	82	74	48	89
Graduation Rate(%)	90.21	81.49	74.12	81.85	88.82	83.29	86.47	87.49	89.25	83.27	84.45	86.93	88.63	85.22	93.95	94.10	79.50	85.13

Source: Current Population Survey, Series P-20.

TABLE 9
Distribution of Unmarried High School Graduates 18 to 24 By Gender, Race/Ethnicity, and Family Income
1970 to 1989

(Numbers in thousands)

Family Income Quartiles	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
High School Graduates	8500	9025	9477	9419	9452	10060	10603	10674	10854	11043	11838	12564	12892	13084	12784	12679	12455	12136	12084	11420
Gender																				
Male HSG	4395	4698	4966	5049	5021	5342	5553	5569	5655	5615	6082	6443	6664	6739	6659	6581	6405	6154	6139	5877
Male Share(%)	51.71	52.06	52.40	53.60	53.12	53.10	52.37	52.17	52.10	50.85	51.38	51.28	51.69	51.51	52.09	51.90	51.43	50.71	50.80	51.46
Female HSG	4105	4327	4511	4370	4431	4718	5050	5105	5199	5428	5756	6121	6228	6345	6125	6098	6050	5982	5945	5543
Female Share(%)	48.29	47.94	47.60	46.40	46.88	46.90	47.63	47.83	47.90	49.15	48.62	48.72	48.31	48.49	47.91	48.10	48.57	49.29	49.20	48.54
Race																				
White HSG	7469	7860	8160	8079	8144	8700	8989	9021	9091	9292	9838	10359	10617	10767	10331	10451	10035	9591	9774	9235
White Share(%)	87.87	87.09	86.10	85.77	86.16	86.48	84.78	84.51	83.76	84.14	83.11	82.45	82.35	82.29	80.81	82.43	80.57	79.03	80.88	80.87
Black HSG	908	1046	1185	1195	1174	1195	1418	1436	1517	1529	1730	1853	1920	1984	2110	1910	2008	1905	1644	1815
Black Share(%)	10.68	11.59	12.50	12.69	12.42	11.88	13.37	13.45	13.98	13.85	14.61	14.75	14.89	15.16	16.51	15.06	16.12	15.70	13.60	15.89
Other Race HSG	123	119	132	145	134	165	196	217	246	222	270	352	355	333	343	318	412	640	666	370
Other Share(%)	1.45	1.32	1.39	1.54	1.42	1.64	1.85	2.03	2.27	2.01	2.81	2.80	2.75	2.55	2.68	2.51	3.31	5.27	5.51	3.24
Ethnicity																				
Hispanic HSG			338	366	440	446	460	451	408	485	589	645	674	686	722	826	892	913	859	835
Hispanic Share(%)			3.57	3.88	4.66	4.43	4.34	4.23	3.76	4.39	4.98	5.13	5.23	5.24	5.65	6.51	7.16	7.52	7.11	7.31
Bottom Quartile																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
Gender																				
Male HSG	1019	1035	1108	1127	1112	1148	1189	1200	1209	1205	1315	1375	1462	1462	1411	1431	1385	1335	1334	1306
Male Share(%)	47.96	45.88	46.76	47.84	47.05	45.63	44.86	44.98	44.57	43.66	44.42	43.79	45.35	44.69	44.15	45.15	44.48	43.99	44.16	45.74
Female HSG	1106	1221	1261	1228	1251	1366	1461	1468	1504	1556	1644	1766	1761	1809	1785	1739	1729	1699	1687	1549
Female Share(%)	52.04	54.12	53.23	52.16	52.95	54.32	55.11	55.02	55.41	56.34	55.55	56.21	54.65	55.31	55.84	54.85	55.52	56.01	55.84	54.26
Race																				
White HSG	1571	1572	1617	1634	1609	1707	1763	1732	1718	1816	1864	1934	2045	1976	1931	2057	1914	1763	1894	1788
White Share(%)	73.95	69.66	68.26	69.38	68.11	67.86	66.49	64.90	63.30	65.78	62.97	61.57	63.44	60.39	60.42	64.88	61.46	58.11	62.71	62.63

Family Income Quartiles	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Black HSG	512	635	700	684	695	748	823	860	908	872	1025	1117	1092	1190	1142	1012	1044	964	792	957
Black Share(%)	24.10	28.15	29.55	29.04	29.43	29.72	31.04	32.23	33.47	31.59	34.64	35.58	33.89	36.38	35.74	31.93	33.52	31.77	26.23	33.52
Other Race HSG	42	49	52	37	59	60	65	77	88	73	71	90	86	105	123	101	156	307	335	110
Other Share(%)	1.98	2.17	2.20	1.57	2.51	2.39	2.45	2.88	3.24	2.64	2.36	2.87	2.67	3.21	3.85	3.19	5.01	10.12	11.09	3.85
Ethnicity																				
Hispanic HSG			157	165	192	179	204	217	196	209	234	254	291	280	295	362	398	395	337	318
Hispanic Share(%)			6.61	7.01	8.10	7.13	7.70	8.14	7.22	7.57	7.89	8.08	9.04	8.55	9.24	11.41	12.80	13.61	11.17	11.14
Second Quartile																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
Gender																				
Male HSG	1098	1193	1288	1267	1293	1370	1412	1383	1444	1397	1550	1627	1688	1726	1731	1709	1657	1568	1615	1504
Male Share(%)	51.65	52.87	54.37	53.80	54.71	54.48	53.27	51.84	53.20	50.62	52.37	51.80	52.38	52.77	54.16	53.92	53.21	51.69	53.45	52.68
Female HSG	1028	1063	1077	1089	1070	1145	1239	1285	1270	1363	1410	1514	1535	1545	1465	1461	1457	1466	1406	1351
Female Share(%)	48.36	47.13	45.46	46.23	45.29	45.53	46.76	48.15	48.81	49.38	47.66	48.20	47.61	47.22	45.85	46.08	46.79	48.30	46.55	47.32
Race																				
White HSG	1876	2005	2104	2073	2069	2204	2268	2281	2306	2317	2438	2603	2657	2748	2537	2584	2458	2379	2484	2287
White Share(%)	88.30	88.86	88.81	88.05	87.56	87.64	85.54	85.47	85.00	83.94	82.38	82.88	82.44	84.01	79.37	81.52	78.93	78.40	82.23	80.11
Black HSG	206	219	236	243	266	267	332	335	353	374	443	434	482	451	571	531	569	525	437	498
Black Share(%)	9.70	9.70	9.95	10.31	11.27	10.62	12.51	12.55	13.01	13.54	14.98	13.82	14.97	13.80	17.86	16.76	18.27	17.29	14.48	17.44
Other Race HSG	43	32	29	39	28	44	51	53	55	70	79	104	84	72	88	55	87	130	100	70
Other Share(%)	2.02	1.42	1.22	1.66	1.18	1.75	1.92	1.99	2.03	2.54	2.67	3.31	2.61	2.20	2.75	1.74	2.79	4.28	3.31	2.45
Ethnicity																				
Hispanic HSG			95	111	137	142	117	113	119	144	183	209	200	196	184	237	273	295	314	271
Hispanic Share(%)			4.00	4.71	5.80	5.66	4.42	4.23	4.39	5.21	6.18	6.65	6.20	5.98	5.75	7.47	8.78	9.74	10.40	9.49
Third Quartile																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
Gender																				
Male HSG	1126	1235	1284	1320	1302	1404	1457	1461	1498	1469	1600	1717	1738	1794	1748	1685	1652	1611	1616	1525
Male Share(%)	52.99	54.74	54.20	56.05	55.10	55.83	54.96	54.74	55.20	53.21	54.05	54.66	53.92	54.85	54.69	53.15	53.05	53.09	53.49	53.43

Family Income Quartiles	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Female HSG	999	1021	1089	1034	1061	1111	1194	1207	1215	1291	1357	1424	1485	1477	1448	1484	1461	1423	1406	1330
Female Share(%)	47.01	45.26	45.97	43.91	44.90	44.17	45.04	45.22	44.77	46.76	45.84	45.34	46.08	45.15	45.31	46.81	46.92	46.90	46.54	46.58
Race																				
White HSG	1962	2119	2196	2164	2197	2356	2423	2457	2497	2531	2748	2902	2896	2981	2905	2820	2726	2684	2657	2519
White Share(%)	92.33	93.93	92.70	91.89	92.98	93.68	91.40	92.06	92.00	91.67	92.84	92.39	89.85	91.13	90.89	88.96	87.54	88.46	87.95	88.23
Black HSG	134	117	156	154	149	117	181	168	155	189	154	160	249	212	225	265	292	260	274	249
Black Share(%)	6.31	5.19	6.59	6.54	6.31	4.65	6.83	6.29	5.71	6.85	5.20	5.09	7.73	6.48	7.04	8.36	9.38	8.57	9.07	8.72
Other Race HSG	29	20	17	37	17	42	47	44	62	41	58	79	78	78	66	85	96	90	90	87
Other Share(%)	1.36	0.87	0.72	1.57	0.72	1.67	1.77	1.65	2.28	1.48	1.96	2.52	2.42	2.38	2.07	2.68	3.08	2.97	2.98	3.05
Ethnicity																				
Hispanic HSG			55	59	67	60	84	72	61	66	95	101	111	125	134	127	138	149	160	157
Hispanic Share(%)			2.32	2.51	2.84	2.39	3.17	2.70	2.25	2.39	3.21	3.22	3.44	3.82	4.19	4.01	4.43	4.91	5.30	5.50
Top Quartile																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
Gender																				
Male HSG	453	1234	1286	1335	1315	1420	1495	1524	1503	1543	1617	1724	1776	1757	1769	1756	1711	1646	1576	1542
Male Share(%)	54.26	54.70	54.28	56.69	55.65	56.46	56.39	57.10	55.38	55.89	54.63	54.89	55.10	53.71	55.35	55.39	54.95	54.25	52.17	54.01
Female HSG	972	1022	1083	1019	1049	1096	1155	1145	1210	1218	1344	1417	1447	1514	1427	1414	1403	1394	1446	1313
Female Share(%)	45.74	45.30	45.72	43.27	44.39	43.58	43.57	42.90	44.58	44.11	45.41	45.11	44.90	46.29	44.65	44.61	45.05	45.95	47.86	45.99
Race																				
White HSG	2059	2164	2243	2208	2269	2433	2536	2551	2570	2627	2789	2920	3019	3062	2958	2991	2937	2765	2738	2641
White Share(%)	96.89	95.92	94.68	93.76	96.02	96.74	95.66	95.58	94.69	95.15	94.22	92.96	93.67	93.61	92.55	94.35	94.32	91.13	90.63	92.50
Black HSG	55	75	93	114	63	63	83	73	101	94	108	142	96	131	172	101	104	156	140	111
Black Share(%)	2.59	3.32	3.93	4.84	2.67	2.50	3.13	2.74	3.72	3.40	3.65	4.52	2.98	4.00	5.38	3.19	3.34	5.14	4.63	3.89
Other Race HSG	10	17	33	33	31	19	32	45	43	40	63	79	108	78	66	78	73	113	143	103
Other Share(%)	0.47	0.75	1.39	1.40	1.31	0.76	1.21	1.69	1.58	1.45	2.13	2.52	3.35	2.38	2.07	2.46	2.34	3.72	4.73	3.61
Ethnicity																				
Hispanic HSG			32	30	45	64	54	49	32	66	77	82	72	86	108	100	82	74	48	89
Hispanic Share(%)			1.35	1.27	1.90	2.54	2.04	1.84	1.18	2.39	2.60	2.61	2.23	2.63	3.38	3.15	2.63	2.44	1.59	3.12

Source: Current Population Survey, Series P-20.

TABLE 10
High School Graduation for Married Age 18 to 24 By Family Income 1970 to 1989

(Numbers in thousands)

Total	**1970**	**1971**	**1972**	**1973**	**1974**	**1975**	**1976**	**1977**	**1978**	**1979**	**1980**	**1981**	**1982**	**1983**	**1984**	**1985**	**1986**	**1987**	**1988**	**1989**
Population	8590	8786	8838	9167	9066	8644	8292	8035	7731	7526	7429	7470	7229	6959	6484	6164	5852	5517	4904	4869
High School Graduates	6472	6736	6796	7153	7153	6828	6390	6234	6015	5815	5841	5877	5587	5388	5045	4877	4616	4331	3823	3804
Graduation Rate(%)	75.34	76.67	76.90	78.03	78.90	78.99	77.06	77.59	77.80	77.27	78.62	78.67	77.29	77.42	77.81	79.12	78.88	78.50	77.96	78.13
Family Income Quartiles																				
Bottom Quartile																				
Population	2494	2571	2550	2653	2645	2540	2479	2451	2339	2252	2292	2182	2242	2181	1965	1919	1807	1726	1495	1513
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1347	1261	1219	1154	1083	956	951
Graduation Rate(%)	64.86	65.51	66.64	67.39	67.61	67.19	64.43	63.58	64.29	64.56	63.71	67.35	62.31	61.75	64.20	63.55	63.86	62.72	63.92	62.85
Difference From Top Quartile	-21.68	-23.64	-21.54	-20.55	-22.11	-23.22	-24.85	-28.39	-26.32	-24.95	-26.23	-20.80	-27.19	-30.36	-26.24	-27.77	-27.50	-28.14	-27.58	-30.84
Second Quartile																				
Population	2204	2296	2288	2345	2345	2248	2150	2063	1953	1890	1801	1889	1801	1738	1631	1532	1461	1366	1237	1235
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1347	1261	1219	1154	1083	956	951
Graduation Rate(%)	73.41	73.36	74.27	76.24	76.25	75.94	74.29	75.53	76.99	76.90	81.08	77.78	77.54	77.52	77.33	79.59	78.99	79.24	77.28	76.99
Difference From Top Quartile	-13.13	-15.79	-13.91	-11.70	-13.47	-14.47	-14.99	-16.44	-13.62	-12.61	-8.86	-10.37	-11.96	-14.59	-13.11	-11.73	-12.37	-11.62	-14.22	-16.70
Third Quartile																				
Population	2022	2031	2074	2135	2082	1968	1873	1826	1779	1759	1712	1733	1625	1576	1494	1378	1321	1232	1128	1106
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1347	1261	1219	1154	1083	956	951
Graduation Rate(%)	80.03	82.93	81.92	83.77	85.88	86.76	85.30	85.35	84.53	82.63	85.28	84.80	85.93	85.38	84.44	88.46	87.37	87.85	84.75	86.01
Difference From Top Quartile	-6.51	-6.22	-6.26	-4.17	-3.84	-3.65	-3.98	-6.62	-6.08	-6.88	-4.66	-3.35	-3.57	-6.73	-6.00	-2.86	-3.99	-3.01	-6.75	-7.68
Top Quartile																				
Population	1870	1889	1927	2033	1993	1888	1789	1695	1660	1624	1624	1667	1561	1462	1395	1335	1263	1192	1044	1015
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1347	1261	1219	1154	1083	956	951
Graduation Rate(%)	86.54	89.15	88.18	87.94	89.72	90.41	89.28	91.97	90.61	89.51	89.94	88.15	89.50	92.11	90.44	91.32	91.36	90.86	91.50	93.69

Source: Current Population Survey, Series P-20.

TABLE 11
Male High School Graduation Rates for Married Age 18 to 24 By Family Income 1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Population	3183	3292	3331	3513	3439	3248	3016	3017	2902	2823	2812	2780	2635	2477	2303	2162	2138	2023	1662	1664
High School Graduates	2391	2545	2549	2745	2738	2597	2338	2331	2248	2205	2161	2128	2027	1844	1744	1660	1641	1549	1244	1265
Graduation Rate(%)	75.12	77.31	76.52	78.14	79.62	79.96	77.52	77.26	77.46	77.97	76.85	76.55	76.93	74.44	75.73	76.78	76.75	76.57	74.85	76.02
Family Income Quartiles																				
Bottom Quartile																				
Population	1018	1057	1111	1134	1089	1050	991	988	939	939	947	872	898	843	778	735	724	701	555	575
High School Graduates	667	706	750	766	747	734	650	628	601	631	590	585	568	490	477	464	458	447	345	353
Graduation Rate(%)	65.55	66.77	67.51	67.54	68.63	69.91	65.58	63.50	63.95	67.19	62.28	67.02	63.24	58.16	61.36	63.13	63.30	63.86	62.06	61.45
Difference From Top Quartile (%)	-19.37	-21.55	-26.90	-20.16	-21.41	-19.80	-24.44	-26.80	-25.99	-21.81	-23.81	-17.89	-26.58	-31.65	-31.08	-26.75	-25.58	-23.23	-25.31	-30.97
Second Quartile																				
Population	830	875	1288	918	890	859	800	791	753	701	694	729	647	635	590	549	550	514	426	407
High School Graduates	618	662	645	717	697	668	606	610	591	550	566	546	504	484	454	426	418	404	320	303
Graduation Rate(%)	74.42	75.60	81.72	78.18	78.26	77.83	75.71	77.09	78.52	78.53	81.66	74.99	77.88	76.18	77.00	77.49	76.12	78.55	75.11	74.48
Difference From Top Quartile (%)	-10.50	-12.72	-12.62	-9.52	-11.78	-11.88	-14.31	-13.21	-11.42	-10.47	-4.43	-9.92	-11.94	-13.63	-15.44	-12.39	-12.76	-8.54	-12.26	-17.94
Third Quartile																				
Population	725	739	1225	778	761	692	641	686	663	625	642	626	589	560	491	459	479	445	360	362
High School Graduates	588	630	593	662	665	615	557	595	564	522	549	527	505	476	402	393	422	381	299	315
Graduation Rate(%)	81.11	85.17	90.29	85.13	87.34	88.71	86.84	86.81	85.12	83.58	85.52	84.24	85.77	84.93	81.84	85.81	88.07	85.71	83.11	86.43
Difference From Top Quartile (%)	-3.81	-3.15	-4.12	-2.57	-2.70	-1.00	-3.18	-3.49	-4.82	-5.42	-0.57	-0.67	-4.05	-4.88	-10.60	-4.07	-0.81	-1.38	-4.26	-5.99
Top Quartile																				
Population	610	620	1206	683	699	647	584	552	547	564	529	553	502	437	444	420	385	364	321	318
High School Graduates	518	548	561	599	629	580	526	498	492	592	456	470	450	393	411	377	342	317	281	294
Graduation Rate(%)	84.92	88.32	94.41	87.70	90.04	89.71	90.02	90.30	89.94	89.00	86.09	84.91	89.82	89.81	92.44	89.88	88.88	87.09	87.37	92.42

Source: Current Population Survey, Series P-20.

TABLE 12
Female High School Graduation Rates for Married Age 18 to 24 By Family Income 1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Population	5407	5494	5507	5654	5627	5396	5276	5018	4829	4698	4617	4690	4594	4482	4181	4002	3714	3494	3242	3205
High School Graduates	4081	4191	4247	4408	4415	4231	4052	3903	3767	3610	3680	3749	3560	3544	3301	3217	2975	2782	2579	2539
Graduation Rate(%)	75.48	76.28	77.12	77.96	78.46	78.41	76.80	77.78	78.01	76.84	79.71	79.94	77.49	79.07	78.95	80.38	80.10	79.62	79.55	79.22
Family Income Quartiles																				
Bottom Quartile																				
Population	1477	1513	1439	1519	1556	1491	1489	1463	1400	1313	1345	1309	1344	1337	1187	1184	1083	1026	939	938
High School Graduates	951	978	949	1022	1041	973	948	931	903	823	870	885	829	857	784	755	696	635	611	598
Graduation Rate(%)	64.39	64.63	65.97	67.28	66.89	65.28	63.66	63.64	64.52	62.67	64.71	67.56	61.68	64.10	66.06	63.81	64.24	61.94	65.03	63.70
Difference From Top Quartile (%)	-22.93	-24.92	-21.68	-20.78	-22.60	-25.50	-25.27	29.14	-26.42	-27.11	-27.09	-22.20	-27.68	-28.99	-23.44	-28.61	-28.20	-30.58	-28.31	-30.57
Second Quartile																				
Population	1373	1420	1408	1478	1455	1389	1350	1273	1200	1190	1107	1160	1155	1103	1041	983	911	880	811	827
High School Graduates	1000	1022	1054	1071	1092	1039	992	949	912	904	894	923	893	862	807	794	736	679	636	647
Graduation Rate(%)	72.81	71.98	74.85	75.00	75.01	74.77	73.44	74.56	76.02	75.94	80.72	79.53	77.35	78.14	77.51	80.76	80.72	77.21	78.42	78.22
Difference From Top Quartile (%)	-14.51	-17.57	-12.80	-13.06	-14.48	-16.01	-15.49	-18.22	-14.92	-13.84	-11.08	-10.23	-12.01	-14.95	-11.99	-11.21	-11.72	-15.31	-14.92	-16.05
Third Quartile																				
Population	1294	1291	1362	1357	1321	1275	1232	1140	1116	1134	1070	1107	1037	1017	1003	920	842	761	768	742
High School Graduates	1030	1054	1107	1126	1123	1093	1041	963	940	931	911	942	892	871	860	826	732	702	657	637
Graduation Rate(%)	79.42	81.64	81.20	83.00	85.04	85.70	84.50	84.49	84.18	82.10	85.14	85.12	86.02	85.63	85.71	89.79	86.97	92.22	85.53	85.82
Difference From Top Quartile (%)	-7.90	-7.91	-6.45	-5.06	-4.45	-5.08	-4.43	-8.29	-6.76	-7.66	-6.66	-4.64	-3.34	-7.46	-3.79	-2.18	-5.47	-0.30	-7.81	-8.45
Top Quartile																				
Population	1260	1269	1298	1350	1294	1241	1205	1143	1112	1060	1094	1114	1059	1025	950	915	878	828	723	697
High School Graduates	1100	1136	1138	1188	1159	1127	1072	1060	1012	952	1004	1000	946	954	850	842	812	766	675	657
Graduation Rate(%)	87.32	89.55	87.65	88.06	89.49	90.78	88.93	92.78	90.94	89.78	91.80	89.76	89.36	93.09	89.50	91.97	92.44	92.52	93.34	94.27

Source: Current Population Survey, Series P-20.

TABLE 13
White High School Graduation for Married Age 18 to 24 By Family Income 1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Population	7755	7987	7992	8251	8159	7767	7585	7335	7105	6862	6820	6854	6533	6391	5841	5453	5257	4949	4408	4385
High School Graduates	5958	6182	6212	6518	6486	6205	5904	5713	5553	5316	5378	5413	5048	4961	4544	4323	4115	3854	3411	3401
Graduation Rate(%)	76.83	77.40	77.73	79.00	79.50	79.89	77.84	77.89	78.16	77.47	78.86	78.98	77.27	77.62	77.79	79.28	78.28	77.87	77.38	77.56
Family Income Quartiles																				
Bottom Quartile																				
Population	2130	2246	2211	2280	2294	2200	2200	2099	2045	1940	2001	1933	1921	1937	1703	1628	1549	1500	1310	1344
High School Graduates	1441	1510	1486	1568	1564	1500	1438	1317	1313	1242	1275	1296	1166	1183	1066	1017	959	914	815	835
Graduation Rate(%)	67.65	67.20	67.23	68.79	68.18	68.19	65.38	62.74	64.20	64.01	63.74	67.07	60.69	61.05	62.62	62.49	61.95	60.92	62.22	62.10
Difference From Top Quartile (%)	-19.62	-21.85	-21.47	-19.72	-21.68	-22.62	-24.43	-29.57	-26.22	-25.47	-25.89	-21.05	-28.90	-31.53	-28.04	-28.88	-29.14	-29.97	-30.10	-31.93
Second Quartile																				
Population	2025	2105	2079	2109	2119	1980	1958	1908	1801	1767	1681	1740	1635	1602	1474	1348	1294	1221	1108	1098
High School Graduates	1502	1546	1561	1620	1623	1511	1458	1440	1390	1363	1366	1373	1271	1241	1126	1080	1005	956	844	830
Graduation Rate(%)	74.15	73.44	75.11	76.83	76.60	76.29	74.48	75.44	77.18	77.11	81.26	78.88	77.73	77.45	76.41	80.12	77.65	78.27	76.15	75.59
Difference From Top Quartile (%)	-13.12	-15.61	-13.59	-11.68	-13.26	-14.52	-15.33	-16.87	-13.24	-12.37	-8.37	-9.24	-11.86	-15.13	-14.25	-11.25	-13.44	-12.62	-16.17	-18.44
Third Quartile																				
Population	1861	1889	1901	1976	1914	1830	1749	1730	1673	1639	1598	1621	1567	1479	1365	1256	1246	1131	1031	1005
High School Graduates	1498	1571	1567	1660	1652	1599	1500	1481	1422	1356	1356	1370	1295	1266	1173	1110	1086	987	867	855
Graduation Rate(%)	80.49	83.16	82.41	84.01	86.33	87.36	85.77	85.63	84.67	82.69	84.87	84.47	85.91	85.63	85.99	88.37	87.20	87.29	84.08	85.02
Difference From Top Quartile (%)	-6.78	-5.89	-6.29	-4.50	-3.53	-3.45	-4.04	-6.68	-5.75	-6.79	-4.76	-3.65	-3.68	-6.95	-4.67	-3.00	-3.89	-3.60	-8.24	-9.01
Top Quartile																				
Population	1739	1747	1801	1887	1832	1757	1678	1598	1580	1515	1540	1560	1469	1373	1300	1222	1168	1098	959	938
High School Graduates	1518	1556	1598	1670	1647	1595	1507	1475	1428	1356	1380	1375	1316	1272	1178	1116	1064	998	886	882
Graduation Rate(%)	87.27	89.05	88.70	88.51	89.86	90.81	89.81	92.31	90.42	89.48	89.63	88.12	89.59	92.58	90.66	91.37	91.09	90.89	92.32	94.03

Source: Current Population Survey, Series P-20.

TABLE 14
Black High School Graduation for Married Age 18 to 24 By Family Income 1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Population	751	726	784	821	778	741	610	602	539	531	486	479	546	397	432	532	429	411	386	354
High School Graduates	451	489	541	567	569	529	421	454	396	397	372	376	436	315	370	431	373	367	333	318
Graduation Rate(%)	60.05	67.36	69.01	69.06	73.14	71.39	69.02	75.42	73.47	74.76	76.54	78.50	79.85	79.35	85.65	81.02	86.95	89.29	86.27	89.83
Family Income Quartiles																				
Bottom Quartile																				
Population	331	307	316	325	301	304	253	316	255	253	234	207	257	172	173	224	200	168	143	124
High School Graduates	156	156	200	186	185	184	148	222	160	176	149	156	193	125	138	158	158	136	114	99
Graduation Rate(%)	47.25	50.86	63.13	57.36	61.36	60.59	58.22	70.22	62.94	69.42	63.39	75.47	74.99	72.54	79.88	70.71	79.19	80.89	77.33	79.71
Difference From Top Quartile (%)	-28.01	-38.50	-17.51	-23.11	-25.57	-27.28	-24.02	-11.85	-33.22	-20.27	-32.20	-13.36	-15.90	-18.59	-6.81	-20.91	-18.58	-14.55	-12.42	-20.29
Second Quartile																				
Population	165	179	193	213	188	224	171	132	131	98	93	115	123	104	121	130	131	106	106	108
High School Graduates	105	131	127	153	142	168	127	105	100	69	73	80	96	84	107	110	120	97	94	101
Graduation Rate(%)	63.27	73.13	65.53	71.79	75.49	75.00	74.01	79.52	76.02	71.15	78.49	69.12	78.39	80.52	88.55	84.62	91.67	91.95	88.20	92.89
Difference From Top Quartile (%)	-11.99	-16.23	-15.11	-8.68	-11.44	-12.87	-8.23	-2.55	-20.14	-18.54	-17.10	-19.71	-12.50	-10.61	+1.86	-7.00	-6.10	-3.49	-1.55	-7.11
Third Quartile																				
Population	142	129	166	148	145	115	110	79	89	104	96	86	96	72	76	90	45	71	77	84
High School Graduates	105	102	127	119	117	90	84	65	74	84	91	77	83	61	71	82	43	71	75	81
Graduation Rate(%)	73.98	79.51	76.64	80.38	80.80	78.72	77.03	83.07	83.52	80.27	94.35	89.75	86.70	85.85	93.29	91.13	94.85	99.51	97.48	96.34
Difference From Top Quartile (%)	-1.28	-9.85	-4.00	-0.09	-6.13	-9.15	-5.21	+1.00	-12.64	-9.42	-1.24	+0.92	-4.19	-5.28	+6.60	-0.49	-2.92	+4.07	+7.73	-3.66
Top Quartile																				
Population	113	112	108	135	144	99	76	75	64	76	62	72	70	50	62	87	53	66	59	37
High School Graduates	85	100	87	109	125	87	62	61	62	68	60	64	64	45	54	80	52	63	53	37
Graduation Rate(%)	75.26	89.36	80.64	80.47	86.93	87.87	82.24	82.07	96.16	89.69	95.59	88.83	90.89	91.13	86.69	91.62	97.77	95.44	89.75	100.00

Source: Current Population Survey, Series P-20.

TABLE 15
Other Race High School Graduation for Married Age 18 to 24 By Family Income 1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Population	84	73	62	95	129	136	97	98	87	133	123	137	150	171	211	179	166	157	110	130
High School Graduates	63	65	43	68	98	94	65	67	66	102	91	88	103	112	131	123	128	110	79	85
Participation Rate(%)	75.00	89.04	69.35	71.58	75.97	69.12	67.01	68.37	75.86	76.69	73.98	64.23	68.67	65.50	62.09	68.72	77.11	70.06	71.82	65.38
Family Income Quartiles																				
Bottom Quartile																				
Population	33	18	23	48	50	36	26	36	39	59	57	42	64	72	89	67	58	58	42	45
High School Graduates	21	18	13	34	39	23	12	20	31	36	36	17	38	39	57	44	37	33	27	17
Participation Rate(%)	63.84	100.00	56.52	70.83	78.00	63.89	46.15	55.56	79.49	61.02	63.16	40.48	59.38	54.17	64.04	65.67	63.79	56.90	64.29	37.78
Difference From Top Quartile (%)	-19.69	+6.67	-21.26	-10.99	-16.12	-14.24	-36.71	-44.44	-8.01	-29.89	-27.25	-45.23	-17.89	-22.75	-23.84	-22.79	-26.69	-21.67	-1.09	-42.22
Second Quartile																				
Population	14	12	16	23	38	44	21	23	21	25	27	34	43	32	36	54	36	39	23	29
High School Graduates	11	7	11	15	23	28	13	14	14	22	21	16	30	22	28	29	29	30	18	20
Participation Rate(%)	78.57	58.33	68.75	65.22	60.53	63.64	61.90	60.87	66.67	88.00	77.78	47.06	69.77	68.75	77.78	53.70	80.56	76.92	78.26	68.97
Difference From Top Quartile (%)	-4.76	-35.00	-9.03	-16.60	-33.59	-14.49	-20.96	-39.13	-20.83	-2.91	-13.13	-38.65	-7.50	-8.17	-10.51	-34.76	-9.92	-1.65	+12.88	-11.23
Third Quartile																				
Population	19	13	7	11	23	23	14	17	17	16	18	26	22	27	53	32	30	30	20	17
High School Graduates	15	11	5	9	19	18	14	13	8	14	13	22	19	20	17	27	25	25	14	15
Participation Rate(%)	78.95	84.62	71.43	81.82	82.61	78.26	100.00	76.47	47.06	87.50	72.22	84.62	86.36	74.07	32.08	84.38	83.33	83.33	70.00	88.24
Difference From Top Quartile (%)	-4.38	-8.71	-6.35	0.00	-11.51	+0.13	+17.14	-23.53	-40.44	-3.41	-18.69	-1.09	+9.09	-2.85	-55.80	-4.08	-7.15	+4.76	+4.12	+8.24
Top Quartile																				
Population	18	30	18	11	17	32	35	22	16	33	22	35	22	39	33	26	42	28	26	40
High School Graduates	15	28	14	9	16	25	29	22	14	30	20	30	17	30	29	23	38	22	17	32
Participation Rate(%)	83.33	93.33	77.78	81.82	94.12	78.13	82.86	100.00	87.50	90.91	90.91	85.71	77.27	76.92	87.88	88.46	90.48	78.57	65.38	80.00

Source: Current Population Survey, Series P-20.

TABLE 16
Hispanic High School Graduation Rates for Married Age 18 to 24 By Family Income 1972 to 1989

(Numbers in thousands)

Total	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Population	532	515	553	482	551	574	606	576	559	629	644	611	563	580	673	657	686	761
High School Graduates	265	260	307	248	262	290	316	286	259	328	319	284	282	350	349	375	324	360
Graduation Rate(%)	49.81	50.49	55.52	51.45	47.55	50.52	52.15	49.65	46.33	52.15	49.53	46.48	50.09	60.34	51.86	57.08	47.23	47.31
Family Income Quartiles																		
Bottom Quartile																		
Population	229	259	253	193	246	247	267	284	265	245	299	281	254	263	315	331	314	361
High School Graduates	84	106	122	77	90	92	103	122	85	88	108	84	98	124	110	143	119	149
Graduation Rate(%)	36.70	41.05	48.24	39.81	36.80	37.16	38.53	42.91	32.00	35.89	36.05	29.76	38.68	47.09	34.85	43.33	38.00	41.25
Difference From Top Quartile (%)	-34.58	-23.44	-22.91	-25.37	-40.55	-45.43	-44.59	-33.95	-25.56	-29.15	-41.24	-51.22	-43.89	-33.23	-35.44	-35.93	-19.43	-34.42
Second Quartile																		
Population	146	121	168	129	177	152	176	141	111	152	155	133	145	134	147	134	176	117
High School Graduates	79	69	91	60	78	69	97	66	66	82	74	59	71	91	82	88	87	76
Graduation Rate(%)	54.06	57.60	54.21	46.77	44.09	45.80	54.91	46.23	59.68	53.70	47.79	44.80	48.81	67.66	55.81	65.14	49.67	64.95
Difference From Top Quartile (%)	-17.22	-6.89	-16.94	-18.41	-33.26	-36.79	-28.21	-30.13	+2.12	-11.34	-30.00	-36.18	-33.76	-12.66	-14.48	-14.12	-7.76	-10.72
Third Quartile																		
Population	92	85	73	97	79	91	108	79	98	133	108	97	80	94	117	95	108	213
High School Graduates	55	52	52	70	56	59	70	43	59	94	73	59	44	64	91	67	67	83
Graduation Rate(%)	60.32	60.73	70.87	72.13	70.08	64.79	65.41	54.25	60.27	70.79	67.97	61.36	54.74	68.28	77.83	70.42	61.74	38.69
Difference From Top Quartile (%)	-10.96	-3.76	-0.28	+6.95	-7.27	-17.80	-17.71	-22.11	+2.71	+5.75	-9.82	-19.62	-27.83	-12.04	+7.54	-8.84	+4.31	-36.98
Top Quartile																		
Population	66	51	60	63	49	85	56	71	85	98	82	101	84	88	94	97	88	69
High School Graduates	47	33	43	41	38	70	46	54	49	64	64	82	69	71	66	77	51	52
Graduation Rate(%)	71.28	64.49	71.15	65.18	77.35	82.59	83.12	76.86	57.56	65.04	77.79	80.98	82.57	80.32	70.29	79.26	57.43	75.67

Source: Current Population Survey, Series P-20.

TABLE 17
Distribution of Married Age 18 to 24 High School Graduates By Gender, Race/Ethnicity, and Family Income 1970 to 1989

(Numbers in thousands)

Family Income Quartiles	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
High School Graduates	6472	6736	6796	7153	7153	6828	6390	6234	6015	5815	5841	5877	5587	5388	5045	4877	4616	4331	3823	3804
Gender																				
Male HSG	2391	2545	2549	2745	2738	2597	2338	2331	2248	2205	2161	2128	2027	1844	1744	1660	1641	1549	1244	1265
Male Share(%)	36.94	37.78	37.51	38.38	38.28	38.03	36.59	37.39	37.37	37.92	37.00	36.21	36.28	34.22	34.57	34.04	35.55	35.77	32.54	33.25
Female HSG	4081	4191	4247	4408	4415	4231	4052	3903	3767	3610	3680	3749	3560	3544	3301	3217	2975	2782	2579	2539
Female Share(%)	63.06	62.22	62.49	61.62	61.72	61.97	63.41	62.61	62.63	62.08	63.00	63.79	63.72	65.78	65.43	65.96	64.45	64.23	67.46	66.75
Race																				
White HSG	5958	6182	6212	6518	6486	6205	5904	5713	5553	5316	5378	5413	5048	4961	4544	4323	4115	3854	3411	3401
White Share(%)	92.06	91.78	91.41	91.12	90.68	90.88	92.39	91.64	92.32	91.42	92.07	92.10	90.35	92.07	90.07	88.64	89.15	88.99	89.22	89.41
Black HSG	451	489	541	567	569	529	421	454	396	397	372	376	436	315	370	431	373	367	333	318
Black Share(%)	6.97	7.26	7.96	7.93	7.95	7.75	6.59	7.28	6.58	6.83	6.37	6.40	7.80	5.85	7.33	8.84	8.08	8.47	8.71	8.36
Other Race HSG	63	65	43	68	98	94	65	67	66	102	91	88	103	112	131	123	128	110	79	85
Other Share(%)	0.97	9.95	0.63	0.95	1.37	1.38	1.02	1.07	1.10	1.75	1.56	1.50	1.84	2.08	2.60	2.52	2.77	2.54	2.07	2.23
Ethnicity																				
Hispanic HSG			265	260	307	248	262	290	316	286	259	328	319	284	282	350	349	375	324	360
Hispanic Share(%)			3.90	3.63	4.29	3.63	4.10	4.65	5.25	4.92	4.43	5.58	5.71	5.27	5.59	7.18	7.56	8.66	8.48	9.46
Bottom Quartile																				
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1347	1261	1219	1154	1083	956	951
Gender																				
Male HSG	667	706	750	766	747	734	650	628	601	631	590	585	568	490	477	464	458	447	345	353
Male Share(%)	41.22	41.92	44.13	42.84	41.78	43.00	40.68	40.28	39.96	43.40	40.41	39.82	40.66	36.38	37.83	38.06	39.69	41.27	36.09	37.12
Female HSG	951	978	949	1022	1041	973	948	931	903	823	870	885	829	857	784	755	696	635	611	598
Female Share(%)	58.78	58.08	55.86	57.16	58.22	57.00	59.32	59.72	60.04	56.60	59.59	60.25	59.34	63.62	62.17	61.94	60.31	58.63	63.91	62.88
Race																				
White HSG	1441	1510	1486	1568	1564	1500	1438	1317	1313	1242	1275	1296	1166	1183	1066	1017	959	914	815	835
White Share(%)	89.06	89.67	87.46	87.70	87.47	87.87	89.99	84.48	87.30	85.42	87.33	88.22	83.46	87.82	84.54	83.43	83.10	84.40	85.25	87.80

Family Income Quartiles	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Black HSG	156	156	200	186	185	184	148	222	160	176	149	156	193	125	138	158	158	136	111	99
Black Share(%)	9.64	9.26	11.77	10.40	10.35	10.78	9.26	14.24	10.64	12.10	10.21	10.62	13.82	9.28	10.94	12.96	13.69	12.56	11.61	10.41
Other Race HSG	21	18	13	34	39	23	12	20	31	36	36	18	38	39	57	44	37	32	30	17
Other Share(%)	1.30	1.07	0.77	1.90	2.18	1.35	0.75	1.28	2.06	2.48	2.47	1.23	2.72	2.90	4.52	3.61	3.21	2.95	3.13	1.79
Ethnicity																				
Hispanic HSG			84	106	122	77	90	92	103	122	85	88	108	84	98	124	110	143	119	149
Hispanic Share(%)			4.94	5.93	6.82	4.51	5.63	5.90	6.85	8.39	5.82	5.99	7.73	6.24	7.77	10.17	9.53	13.20	12.45	15.66
Second Quartile																				
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1347	1261	1219	1154	1083	956	951
Gender																				
Male HSG	618	662	645	717	697	668	606	610	591	550	566	546	504	484	454	426	418	404	320	303
Male Share(%)	38.20	39.31	37.96	40.10	38.98	39.13	37.92	39.13	39.30	37.83	38.77	37.17	36.08	35.93	36.00	34.95	36.22	37.30	33.47	31.86
Female HSG	1000	1022	1054	1071	1092	1039	992	949	912	904	894	923	893	862	807	794	736	679	636	647
Female Share(%)	61.80	60.69	62.04	59.90	61.07	60.87	62.08	60.87	60.64	62.17	61.23	62.83	63.92	63.99	64.00	65.14	63.78	62.70	66.53	68.03
Race																				
White HSG	1502	1546	1561	1620	1623	1511	1458	1440	1390	1363	1366	1373	1271	1241	1126	1080	1005	956	844	830
White Share(%)	92.83	91.81	91.88	90.60	90.77	88.52	91.24	92.37	92.42	93.74	93.56	93.46	90.98	92.13	89.29	88.60	87.09	88.27	88.28	87.28
Black HSG	105	131	127	153	142	168	127	105	100	69	73	80	96	84	107	110	120	97	94	101
Black Share(%)	6.49	7.78	7.47	8.56	7.94	9.84	7.95	6.74	6.65	4.75	5.00	5.45	6.87	6.24	8.47	9.02	10.40	8.96	9.83	10.62
Other Race HSG	11	7	11	15	24	28	13	14	13	22	21	16	30	21	28	30	29	30	18	20
Other Share(%)	0.68	0.42	0.65	0.84	1.34	1.64	0.81	0.89	0.86	1.51	1.44	1.09	2.15	1.56	2.22	2.46	2.51	2.77	1.88	240
Ethnicity																				
Hispanic HSG			79	69	91	60	78	69	97	66	66	82	74	59	71	91	82	88	87	76
Hispanic Share(%)			4.65	3.86	5.09	3.51	4.88	4.43	6.45	4.54	4.52	5.58	5.30	4.38	5.63	7.47	7.11	8.13	9.10	7.99
Third Quartile																				
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1347	1261	1219	1154	1083	956	951
Gender																				
Male HSG	588	630	593	662	665	615	557	595	564	522	549	527	505	476	402	393	422	381	299	315
Male Share(%)	36.34	37.41	34.90	37.02	37.12	36.03	34.86	38.17	37.50	35.90	37.60	35.87	36.15	35.34	31.88	32.24	36.57	35.18	31.28	33.12

Family Income Quartiles	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Female HSG	1030	1054	1106	1126	1123	1093	1041	963	940	931	911	942	892	871	860	826	732	702	657	637
Female Share(%)	63.66	62.59	65.10	62.98	62.81	64.03	65.14	61.77	62.50	64.03	62.40	64.13	63.85	64.66	68.20	67.76	63.43	64.82	68.72	66.98
Race																				
White HSG	1498	1571	1567	1660	1652	1599	1500	1481	1422	1356	1356	1370	1295	1266	1173	1110	1086	987	867	855
White Share(%)	92.58	93.29	92.23	92.84	92.39	93.67	93.87	95.00	94.55	93.26	92.88	93.26	92.70	93.99	93.02	91.06	94.11	91.14	90.69	89.91
Black HSG	105	102	127	119	117	90	84	65	74	84	91	77	83	61	71	82	43	71	75	81
Black Share(%)	6.49	6.57	7.47	6.66	6.54	5.27	5.26	4.17	4.92	5.78	6.23	5.24	5.94	4.53	5.63	6.73	3.73	6.56	7.85	8.52
Other Race HSG	15	11	5	9	19	19	14	12	8	13	13	22	19	20	18	27	25	25	14	15
Other Share(%)	0.93	0.65	0.29	0.50	1.06	1.11	0.88	0.77	0.53	0.89	0.89	1.50	1.36	1.48	1.43	2.21	2.17	2.31	1.46	1.58
Ethnicity																				
Hispanic HSG			55	52	52	70	56	59	70	43	59	94	73	59	44	64	91	67	67	83
Hispanic Share(%)			3.24	2.91	2.91	4.10	3.50	3.78	4.65	2.96	4.04	6.40	5.23	4.38	3.49	5.25	7.89	6.19	7.01	8.73
Top Quartile																				
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1347	1261	1219	1154	1083	956	951
Gender																				
Male HSG	518	548	561	599	629	580	526	498	492	502	456	470	450	393	411	377	342	317	281	294
Male Share(%)	32.01	32.54	33.02	33.50	35.18	33.98	32.92	31.94	32.71	34.53	31.23	31.99	32.21	29.18	32.59	30.93	29.64	29.27	29.39	30.91
Female HSG	1100	1136	1138	1189	1159	1127	1072	1060	1012	952	1004	1000	946	954	850	842	812	766	675	657
Female Share(%)	67.99	67.46	66.98	66.50	64.82	66.02	67.08	67.99	67.29	65.47	68.77	68.07	67.72	70.82	67.41	69.07	70.36	70.73	70.61	69.09
Race																				
White HSG	1518	1556	1598	1670	1647	1595	1507	1475	1428	1356	1380	1375	1316	1272	1178	1116	1064	997	886	882
White Share(%)	93.82	92.40	94.06	93.40	92.11	93.44	94.31	94.61	94.95	93.26	94.52	93.60	94.20	94.43	93.42	91.55	92.20	92.06	92.68	92.74
Black HSG	85	100	87	109	125	87	62	61	62	68	60	64	64	45	54	80	52	63	53	37
Black Share(%)	5.25	5.94	5.12	6.10	6.99	5.10	3.88	3.91	4.12	4.68	4.11	4.36	4.58	3.34	4.28	6.56	4.51	5.82	5.54	3.89
Other Race HSG	15	28	14	9	16	25	29	22	14	30	20	31	16	30	29	23	38	23	17	32
Other Share(%)	0.93	1.66	0.82	0.50	0.90	1.46	1.81	1.41	0.93	2.06	1.37	2.11	1.15	2.23	1.59	1.89	3.29	2.12	1.78	3.36
Ethnicity																				
Hispanic HSG			47	33	43	41	38	70	46	54	49	64	64	82	69	71	66	77	51	52
Hispanic Share(%)			2.77	1.85	2.40	2.40	2.38	4.49	3.06	3.71	3.36	4.36	4.58	6.09	5.47	5.82	5.72	7.11	5.33	5.47

Source: Current Population Survey, Series P-20.

TABLE 18
Family Income Quartiles for Unmarried High School Graduates Age 18 to 24
1970 to 1989

	Bottom	Second	Third
1989	$20,017	$35,447	$58,125
1988	19,667	34,904	55,871
1987	17,451	32,397	51,332
1986	16,954	31,316	48,112
1985	16,967	30,978	46,755
1984	15,991	28,525	42,959*
1983	15,086	27,215	40,904*
1982	14,857	26,773	40,160*
1981	13,921	23,820	35,659*
1980	13,214	22,415	33,466*
1979	12,679	21,270	31,692*
1978	11,477	19,271	28,656*
1977	10,614	17,411	25,821*
1976	9,972	16,083	23,793
1975	9,553	14,952	22,152
1974	9,044	14,209	21,191
1973	8,531	13,209	19,700*
1972	7,721	12,258	18,281*
1971	7,356	11,461	17,093*
1970	7,157	10,875	16,219*

*Estimated

TABLE 19
College Participation Rates for Unmarried High School Graduates Age 18 to 24 By Family Income 1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
High School Graduates	8500	9024	9476	9420	9452	10060	10604	10676	10856	11044	11840	12564	12892	13084	12784	12680	12456	12136	12084	11420
College Participants	5207	5470	5676	5494	5447	6000	6436	6306	6235	6221	6731	7276	7384	7538	7414	7472	7431	7483	7556	7044
Participation Rate(%)	61.26	60.62	59.90	58.32	57.63	59.64	60.69	59.07	57.44	56.33	56.85	57.91	57.28	57.61	57.99	58.93	59.66	61.66	62.53	61.68
Family Income Quartiles																				
Bottom Quartile																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
College Participants	974	1058	1077	1026	1038	1173	1183	1227	1223	1230	1246	1351	1356	1359	1264	1292	1309	1309	1337	1273
Participation Rate(%)	45.84	46.88	45.47	43.57	43.93	46.64	44.61	45.96	45.07	44.56	42.11	43.02	40.09	41.56	39.56	40.76	42.03	43.15	44.25	44.60
Difference From Top Quartile (%)	-33.17	-29.68	-28.11	-28.07	-30.13	-28.52	-31.71	-30.44	-25.79	-22.74	-26.52	-25.58	-32.36	-32.20	-32.84	-34.83	-35.27	-35.91	-35.18	-33.64
Second Quartile																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
College Participants	1194	1276	1329	1263	1239	1351	1494	1429	1408	1447	1578	1670	1691	1712	1728	1672	1692	1764	1732	1610
Participation Rate(%)	56.18	56.56	56.09	53.64	52.45	53.72	56.37	53.57	51.90	52.42	53.33	53.17	52.45	52.34	54.05	52.76	54.34	58.15	57.33	56.40
Difference From Top Quartile (%)	-22.83	-20.00	-17.49	-18.00	-21.61	-21.44	-19.95	-22.83	-18.96	-14.88	-15.30	-15.43	-20.00	-21.42	-18.35	-22.83	-22.96	-20.91	-22.10	-21.84
Third Quartile																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
College Participants	1360	1409	1526	1518	1420	1586	1736	1611	1682	1686	1876	2101	2002	2054	2108	2112	2023	2012	2088	1926
Participation Rate(%)	64.01	62.43	64.43	64.46	60.07	63.05	65.50	60.38	61.99	61.07	63.39	66.88	62.12	62.80	65.96	66.63	64.97	66.31	69.11	67.48
Difference From Top Quartile (%)	-15.00	-14.13	-9.15	-7.18	-13.99	-12.11	-10.82	-16.02	-8.87	-6.23	-5.24	-1.72	-10.33	-10.96	-6.44	-8.96	-12.33	-12.75	-10.32	-10.76
Top Quartile																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
College Participants	1679	1727	1743	1687	1750	1890	2023	2039	1923	1858	2031	2155	2335	2413	2314	2396	2407	2399	2400	2234
Participation Rate(%)	79.01	76.56	73.58	71.64	74.06	75.16	76.32	76.40	70.86	67.30	68.63	68.60	72.45	73.76	72.40	75.59	77.30	79.06	79.43	78.24

Source: Current Population Survey, Series P-20.

TABLE 20
Male College Participation Rates for Unmarried High School Graduates Age 18 to 24 By Family Income
1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
High School Graduates	4395	4698	4966	5050	5021	5342	5553	5568	5654	5614	6083	6443	6664	6739	6659	6581	6405	6154	6141	5867
College Participants	2879	3030	3126	3046	2942	3195	3311	3263	3212	3085	3341	3629	3705	3721	3823	3755	3668	3682	3684	3466
Participation Rate(%)	65.51	64.50	62.95	60.32	58.59	59.81	59.63	58.60	56.81	54.95	54.92	56.32	55.60	55.22	57.41	57.06	57.27	59.83	59.99	59.08
Family Income Quartiles																				
Bottom Quartile																				
High School Graduates	1019	1035	1108	1127	1112	1148	1189	1200	1209	1205	1315	1375	1462	1462	1411	1431	1385	1335	1334	1306
College Participants	506	522	563	535	522	550	540	553	570	537	523	573	611	617	589	571	525	547	570	573
Participation Rate(%)	49.63	50.45	50.86	47.45	46.93	47.91	45.40	46.07	47.12	44.55	39.81	41.66	41.82	42.19	41.27	39.87	37.93	40.95	42.73	43.86
Difference From Top Quartile (%)	-33.50	-28.17	-24.48	-24.13	-28.00	-25.69	-27.73	-29.75	-21.73	-19.26	-25.24	-24.03	-28.47	-27.58	-29.63	-33.95	-36.42	-35.00	-32.48	-30.54
Second Quartile																				
High School Graduates	1098	1193	1288	1267	1293	1370	1412	1383	1444	1397	1550	1627	1688	1726	1731	1709	1657	1568	1615	1494
College Participants	667	716	748	699	663	730	765	693	712	710	798	824	824	805	859	819	841	862	869	765
Participation Rate(%)	60.79	59.99	58.05	55.16	51.30	53.28	54.20	50.07	49.33	50.83	51.47	50.65	48.79	46.63	49.64	47.93	50.75	54.95	53.78	51.22
Difference From Top Quartile (%)	-22.34	-18.63	-17.29	-16.42	-23.63	-20.32	-18.93	-25.75	-19.52	-12.98	-13.58	-15.04	-21.50	-23.14	-21.26	-25.89	-23.60	-21.00	-21.43	-23.18
Third Quartile																				
High School Graduates	1126	1235	1284	1320	1302	1404	1457	1461	1498	1469	1600	1717	1738	1794	1748	1685	1652	1611	1615	1525
College Participants	748	822	846	856	772	870	912	861	895	853	968	1099	1022	1074	1119	1069	1030	1027	1061	980
Participation Rate(%)	66.42	66.51	65.88	64.83	59.31	61.96	62.63	58.98	59.71	58.07	60.48	64.04	58.79	59.84	64.08	63.44	62.32	63.75	65.67	64.30
Difference From Top Quartile (%)	-16.71	-12.11	-9.46	-6.75	-15.62	-11.64	-10.50	-16.84	-9.14	-5.74	-4.57	-1.65	-11.50	-9.93	-6.82	-10.38	-12.03	-12.20	-9.54	-10.10
Top Quartile																				
High School Graduates	1153	1234	1286	1335	1315	1420	1495	1524	1504	1543	1617	1724	1776	1757	1769	1756	1711	1646	1575	1542
College Participants	958	971	969	956	985	1045	1094	1155	1035	985	1052	1132	1248	1226	1255	1296	1272	1245	1184	1148
Participation Rate(%)	83.13	78.62	75.34	71.58	74.93	73.60	73.13	75.82	68.85	63.81	65.05	65.69	70.29	69.77	70.90	73.82	74.35	75.95	75.21	74.40

Source: Current Population Survey, Series P-20.

TABLE 21
Female College Participation Rates for Unmarried High School Graduates Age 18 to 24 By Family Income 1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
High School Graduates	4106	4327	4511	4376	4431	4718	5050	5105	5199	5428	5757	6122	6228	6345	6125	6099	6050	5982	5945	5543
College Participants	2328	2440	2550	2454	2505	2805	3126	3043	3023	3136	3390	3648	3679	3816	3591	3717	3764	3804	3871	3578
Participation Rate(%)	56.70	56.39	56.53	56.16	56.53	59.45	61.90	59.61	58.15	57.77	58.88	59.59	59.07	60.14	58.63	60.94	62.21	63.59	65.11	64.55
Family Income Quartiles																				
Bottom Quartile																				
High School Graduates	1106	1221	1261	1228	1251	1366	1461	1468	1504	1556	1644	1766	1761	1809	1785	1739	1729	1699	1687	1549
College Participants	468	535	514	497	516	623	643	673	653	693	722	778	745	742	675	721	784	763	766	701
Participation Rate(%)	42.34	43.86	40.75	40.01	41.26	45.61	44.00	45.81	43.44	44.58	43.90	44.09	42.30	41.04	37.82	41.49	45.34	44.88	45.43	45.23
Difference From Top Quartile (%)	-31.77	-30.22	-30.74	-31.72	-31.74	-31.53	-36.44	-31.36	-29.83	-27.16	-28.92	-28.04	-32.81	-37.35	-36.42	-36.25	-35.53	-37.84	-38.60	-37.53
Second Quartile																				
High School Graduates	1028	1063	1077	1089	1070	1145	1239	1285	1270	1363	1411	1514	1535	1545	1465	1461	1457	1466	1406	1351
College Participants	527	561	581	564	576	621	729	737	696	737	781	846	866	906	868	853	851	903	863	845
Participation Rate(%)	51.26	52.71	53.95	51.84	53.84	54.23	58.81	57.35	54.80	54.05	55.39	55.88	56.46	58.72	59.27	58.40	58.40	61.58	61.40	62.55
Difference From Top Quartile (%)	-22.85	-21.37	-17.54	-19.89	-19.16	-22.91	-21.63	-19.82	-18.47	-17.69	-17.43	-16.25	-18.65	-19.67	-14.97	-19.34	-22.47	-21.14	-22.63	-20.21
Third Quartile																				
High School Graduates	999	1021	1089	1034	1061	1111	1194	1207	1215	1291	1357	1424	1485	1477	1448	1484	1461	1423	1406	1330
College Participants	612	587	681	662	647	716	824	749	787	832	908	1001	981	980	988	1043	994	985	1027	946
Participation Rate(%)	61.29	57.51	62.47	64.05	60.99	64.41	69.00	62.06	64.78	64.43	66.90	70.30	66.03	66.39	68.25	70.26	68.02	69.19	73.06	71.11
Difference From Top Quartile (%)	-12.82	-16.57	-9.02	-7.68	-12.01	-12.73	-11.44	-15.11	-8.49	-7.31	-5.92	-1.83	-9.08	-12.00	-5.99	-7.48	-12.85	-13.53	-10.97	-11.65
Top Quartile																				
High School Graduates	972	1022	1083	1019	1049	1096	1155	1145	1210	1218	1344	1417	1447	1514	1427	1414	1403	1394	1446	1313
College Participants	721	757	774	731	765	845	929	883	887	873	979	1022	1087	1187	1059	1100	1135	1153	1215	1086
Participation Rate(%)	74.11	74.08	71.49	71.73	73.00	77.14	80.44	77.17	73.27	71.74	72.82	72.13	75.11	78.39	74.24	77.74	80.87	82.72	84.03	82.76

Source: Current Population Survey, Series P-20.

TABLE 22
White College Participation Rates for Unmarried High School Graduates
Age 18 to 24 By Family Income
1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
High School Graduates	7468	7860	8161	8079	8144	8700	8990	9020	9091	9291	9838	10359	10617	10767	10331	10451	10036	9591	9773	9235
College Participants	4712	4893	5024	4885	4781	5264	5521	5405	5299	5314	5707	6177	6199	6408	6242	6390	6176	6199	6321	5884
Participation Rate(%)	63.10	62.25	61.56	60.47	58.71	60.51	61.41	59.92	58.29	57.20	58.01	59.63	58.39	59.52	60.42	61.14	61.54	64.63	64.68	63.71
Family Income Quartiles																				
Bottom Quartile																				
High School Graduates	1571	1572	1617	1634	1609	1707	1763	1732	1718	1816	1864	1934	2045	1976	1931	2057	1914	1763	1894	1788
College Participants	757	749	750	754	690	780	789	791	768	796	781	886	871	821	761	853	817	834	865	835
Participation Rate(%)	48.14	47.64	46.38	46.13	42.85	45.71	44.75	45.67	44.70	43.83	41.89	45.80	42.60	41.57	39.41	41.45	42.67	47.29	45.68	46.69
Difference From Top Quartile (%)	-31.29	-29.50	-27.46	-26.04	-31.23	-29.35	-31.28	-30.62	-25.46	-23.53	-26.30	-22.58	-29.32	-32.47	-33.36	-34.25	-34.63	-32.04	-33.63	-31.64
Second Quartile																				
High School Graduates	1876	2005	2104	2073	2069	2204	2268	2280	2306	2317	2438	2603	2657	2748	2537	2584	2458	2379	2484	2287
College Participants	1061	1144	1189	1125	1090	1180	1240	1195	1193	1201	1289	1362	1373	1446	1393	1396	1335	1398	1456	1277
Participation Rate(%)	56.55	57.05	56.51	54.28	52.68	53.51	54.67	52.41	51.72	51.82	52.88	52.31	51.67	52.62	54.92	54.04	54.30	58.79	58.61	55.84
Difference From Top Quartile (%)	-22.88	-20.09	-17.33	-17.89	-21.40	-21.55	-21.36	-23.88	-18.44	-15.54	-15.31	-16.07	-20.25	-21.42	-17.85	-21.66	-23.00	-20.54	-20.70	-22.49
Third Quartile																				
High School Graduates	1962	2119	2196	2164	2197	2356	2423	2457	2497	2531	2748	2902	2896	2981	2905	2820	2726	2684	2657	2519
College Participants	1259	1330	1429	1413	1320	1478	1564	1472	1535	1548	1735	1933	1784	1873	1935	1877	1753	1773	1828	1703
Participation Rate(%)	64.15	62.76	65.06	65.27	60.11	62.73	64.53	59.92	61.49	61.14	63.16	66.61	61.59	62.85	66.61	66.58	64.31	66.06	68.80	67.63
Difference From Top Quartile (%)	-15.28	-14.38	-8.78	-6.90	-13.97	-12.33	-11.50	-16.37	-8.67	-6.22	-5.03	-1.77	-10.33	-11.19	-6.16	-9.12	-12.99	-13.27	-10.51	-10.70
Top Quartile																				
High School Graduates	2059	2164	2243	2208	2269	2433	2536	2551	2570	2627	2789	2920	3019	3062	2958	2991	2937	2765	2738	2641
College Participants	1635	1669	1656	1593	1681	1827	1928	1946	1803	1769	1902	1996	2171	2267	2152	2264	2271	2194	2172	2069
Participation Rate(%)	79.43	77.14	73.84	72.17	74.08	75.06	76.03	76.29	70.16	67.36	68.19	68.38	71.92	74.04	72.77	75.70	77.30	79.33	79.31	78.33

Source: Current Population Survey, Series P-20.

TABLE 23
Black College Participation Rates for Unmarried High School Graduates Age 18 to 24 By Family Income
1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
High School Graduates	908	1046	1185	1196	1173	1195	1418	1436	1517	1529	1730	1853	1920	1984	2110	1909	2009	1906	1644	1815
College Participants	408	492	551	516	560	617	785	730	747	759	833	839	895	904	943	834	938	931	798	897
Participation Rate(%)	44.93	47.04	46.50	43.14	47.74	51.63	55.36	50.84	49.24	49.64	48.15	45.28	46.61	45.56	44.69	43.69	46.69	48.85	48.54	49.42
Family Income Quartiles																				
Bottom Quartile																				
High School Graduates	512	635	700	684	695	748	823	860	908	872	1025	1117	1092	1190	1142	1012	1044	964	792	957
College Participants	188-	274	291	250	300	344	365	378	395	390	426	409	420	476	439	366	398	379	311	368
Participation Rate(%)	36.65	43.17	41.53	36.56	43.07	46.04	44.37	43.94	43.46	44.73	41.57	36.61	38.46	39.97	38.41	36.12	38.51	39.30	39.24	38.50
Difference From Top Quartile (%)	-24.06	-13.65	-24.34	-26.01	-27.50	-37.68	-41.18	-31.06	-34.14	-15.13	-30.25	-31.70	-36.74	-24.47	-27.74	-29.44	-24.16	-30.87	-30.05	-37.36
Second Quartile																				
High School Graduates	206	219	236	243	266	267	331	335	353	374	443	434	482	451	571	531	569	525	438	498
College Participants	103	109	118	109	129	144	216	197	178	205	233	227	248	215	265	242	290	280	204	282
Participation Rate(%)	49.86	49.86	49.82	44.87	48.55	53.74	65.14	58.85	50.52	54.79	52.66	52.23	51.32	47.59	46.42	45.59	50.94	53.35	46.56	56.70
Difference From Top Quartile (%)	-10.85	-6.96	-16.05	-17.70	-22.10	-29.98	-20.41	-16.15	-27.08	-5.07	-19.16	-16.08	-23.88	-16.85	-19.73	-19.97	-7.73	-16.82	-22.73	-19.16
Third Quartile																				
High School Graduates	134	117	156	154	149	117	181	168	155	189	154	160	249	212	225	265	292	260	274	249
College Participants	83	66	81	81	87	76	133	100	96	108	96	166	154	128	125	160	185	163	187	162
Participation Rate(%)	61.72	56.50	51.58	52.30	58.06	65.21	73.47	59.62	61.46	57.04	62.41	66.55	61.83	60.52	55.81	60.39	63.42	62.53	67.99	64.99
Difference From Top Quartile (%)	+1.01	-0.32	-14.29	-10.27	-12.59	-18.51	-12.08	-15.38	-16.14	-2.82	-9.41	-1.76	-13.37	-3.92	-10.34	-5.17	+0.75	-7.64	-1.30	-10.87
Top Quartile																				
High School Graduates	55	75	93	114	63	63	83	73	101	94	108	142	96	131	172	101	104	156	140	111
College Participants	34	43	61	71	44	53	71	55	78	56	77	97	72	84	114	66	65	110	97	85
Participation Rate(%)	60.71	56.82	65.87	62.57	70.65	83.72	85.55	75.00	77.60	59.86	71.82	68.31	75.20	64.44	66.15	65.56	62.67	70.17	69.29	75.86

Source: Current Population Survey, Series P-20.

TABLE 24
Other Race College Participation Rates for Unmarried High School Graduates Age 18 to 24 By Family Income 1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
High School Graduates	124	118	130	145	135	165	196	220	248	224	272	352	355	333	343	320	411	639	667	370
College Participants	87	85	101	93	106	119	130	171	190	148	191	260	290	226	229	248	317	353	437	263
Participation Rate(%)	70.16	72.03	77.69	64.14	78.52	72.12	66.33	77.73	76.61	66.07	70.22	73.86	81.69	67.87	66.76	77.50	77.13	55.24	65.52	71.08
Family Income Quartiles																				
Bottom Quartile																				
High School Graduates	42	49	52	37	59	60	65	77	88	73	71	90	86	105	123	101	156	307	335	110
College Participants	29	35	36	22	48	49	29	58	60	44	39	56	65	62	64	73	94	96	161	70
Participation Rate(%)	69.05	71.43	69.23	59.46	81.36	81.67	44.62	75.32	68.18	60.27	54.93	62.22	75.59	59.05	52.03	72.28	60.26	31.27	48.06	63.64
Difference From Top Quartile (%)	-21.86	-16.81	-9.56	-10.24	+10.71	+29.04	-30.38	-9.12	-29.49	-22.23	-27.61	-16.26	-9.60	-20.44	-20.70	-12.34	-37.00	-61.65	-43.55	-14.03
Second Quartile																				
High School Graduates	43	32	29	39	28	44	52	54	55	70	79	104	84	72	88	55	87	130	99	70
College Participants	30	23	22	29	20	27	38	37	37	41	56	81	70	51	70	34	67	86	72	51
Participation Rate(%)	69.77	71.88	75.86	74.36	71.43	61.36	73.08	68.52	67.27	58.57	70.89	77.88	83.33	70.83	79.55	61.82	77.01	66.15	72.73	72.86
Difference From Top Quartile (%)	-21.14	-16.36	-2.93	+4.66	-9.22	+8.73	-1.92	-15.92	-30.40	-23.93	-11.65	-0.60	-1.86	-8.66	+6.82	-22.80	-20.25	-26.77	-18.88	-4.81
Third Quartile																				
High School Graduates	29	20	17	37	17	42	47	44	62	41	58	79	78	78	66	85	96	90	90	87
College Participants	18	13	16	24	13	32	39	39	51	30	45	62	64	53	48	75	85	76	73	61
Participation Rate(%)	62.07	65.00	94.12	64.86	76.47	76.19	82.98	88.64	82.26	73.17	77.59	78.48	82.05	67.95	72.73	88.24	88.54	84.44	81.11	70.11
Difference From Top Quartile (%)	-28.84	-23.24	+15.33	-4.84	-4.18	+23.56	+7.98	+4.20	-15.41	-9.33	-4.95	0.00	-3.14	-11.54	0.00	+3.62	-8.72	-8.48	-10.50	-7.56
Top Quartile																				
High School Graduates	11	17	33	33	31	19	32	45	43	40	63	79	108	78	66	78	73	113	143	103
College Participants	10	15	26	23	25	10	24	38	42	33	52	62	92	62	48	66	71	105	131	80
Participation Rate(%)	90.91	88.24	78.79	69.70	80.65	52.63	75.00	84.44	97.67	82.50	82.54	78.48	85.19	79.49	72.73	84.62	97.26	92.92	91.61	77.67

Source: Current Population Survey, Series P-20.

TABLE 25
Hispanic College Participation Rates for Unmarried High School Graduates
Age 18 to 24 By Family Income
1972 to 1989

(Numbers in thousands)

Total	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
High School Graduates	348	366	441	445	460	451	408	485	589	646	674	687	722	826	891	913	859	835
College Participants	146	192	256	269	265	253	194	234	317	338	340	363	368	436	444	463	467	405
Participation Rate(%)	41.95	52.46	58.05	60.45	57.61	56.10	47.55	48.25	53.82	52.32	50.45	52.84	50.97	52.78	49.83	50.71	54.60	48.50
Family Income Quartiles																		
Bottom Quartile																		
High School Graduates	157	165	192	179	204	217	196	209	234	254	291	280	295	362	398	395	337	318
College Participants	57	76	103	105	104	99	80	85	109	105	116	136	133	174	164	166	140	144
Participation Rate(%)	36.61	46.21	53.87	58.27	50.73	45.40	41.06	40.46	46.47	41.34	39.95	48.58	44.96	48.05	41.25	42.03	41.41	45.27
Difference From Top Quartile (%)	-7.58	-24.62	-31.49	-12.34	-12.24	-29.11	-26.44	-17.54	-23.53	-27.94	-41.96	-25.15	-17.39	-16.85	-28.19	-37.45	-32.91	-7.00
Second Quartile																		
High School Graduates	95	111	137	142	117	113	119	144	183	209	200	196	184	237	273	295	314	271
College Participants	45	58	74	76	72	65	56	74	97	109	96	92	86	112	153	160	178	125
Participation Rate(%)	47.32	52.00	54.03	53.26	61.72	57.89	46.87	51.62	53.16	52.40	47.84	46.83	46.98	47.28	55.98	54.08	56.68	45.97
Difference From Top Quartile (%)	+3.13	-18.83	-31.33	-17.35	-1.25	-16.62	-20.63	-6.38	-16.84	-16.88	-34.07	-26.90	-15.37	-17.62	-13.46	-25.40	-17.64	-6.30
Third Quartile																		
High School Graduates	55	59	67	60	84	72	61	66	95	101	111	125	134	127	138	149	160	157
College Participants	30	36	41	42	55	52	36	37	57	67	69	71	81	85	70	79	116	90
Participation Rate(%)	54.34	61.27	60.91	70.47	65.08	73.11	59.29	55.80	59.99	66.56	62.24	57.05	60.45	66.96	50.44	52.79	72.45	57.34
Difference From Top Quartile (%)	+10.15	-9.56	-24.45	-0.14	+2.11	-1.40	-8.21	-2.20	-10.01	-2.72	-19.67	-16.68	-1.90	+2.06	-19.00	-26.69	-1.87	+5.07
Top Quartile																		
High School Graduates	32	30	45	64	54	49	32	66	77	82	72	86	108	100	82	74	48	89
College Participants	14	22	38	45	34	37	22	38	54	57	59	63	68	65	57	59	35	46
Participation Rate(%)	44.19	70.83	85.35	70.61	62.97	74.51	67.50	58.00	70.00	69.28	81.91	73.73	62.35	64.90	69.44	79.48	74.32	52.27

Source: Current Population Survey, Series P-20.

TABLE 26
College Participation Behaviors for Unmarried High School Graduates
Age 18 to 24 By Family Income
1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
High School Graduates	8500	9024	9476	9420	9452	10060	10604	10676	10856	11044	11840	12564	12892	13084	12784	12680	12456	12136	12084	11420
Enrolled in College	4195	4368	4414	4166	4190	4751	5012	4940	4791	4816	5214	5535	5609	5654	5609	5567	5552	5782	5803	5470
Enrollment Rate(%)	49.35	48.40	46.58	44.23	44.33	47.23	47.27	46.27	44.13	43.61	44.04	44.05	43.51	43.21	43.88	43.90	44.57	47.64	48.02	47.90
1-3 Years College	726	784	1173	966	888	902	1026	993	1055	1011	1091	1196	1242	1340	1226	1229	1329	1216	1201	1057
Some College Rate(%)	8.54	8.69	12.38	10.25	9.39	8.97	9.68	8.74	9.72	9.15	9.21	9.52	9.63	10.24	9.59	9.69	10.67	10.02	9.94	9.26
4 Years College	287	229	333	362	369	347	398	373	391	395	427	547	535	544	579	606	550	486	551	517
Graduate Rate(%)	3.38	2.54	3.51	3.84	3.90	3.45	3.75	3.49	3.61	3.58	3.61	4.35	4.15	4.16	4.53	4.78	4.42	4.00	4.56	4.53
Bottom Quartile																				
Enrolled in College																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
College Participants	772	820	831	744	795	921	914	925	927	897	887	994	949	932	880	933	945	986	968	974
Enrolled Rate(%)	36.32	36.34	35.06	31.60	33.65	36.02	34.50	34.65	34.17	32.49	29.98	31.67	29.45	28.50	27.53	29.43	30.34	32.50	32.04	34.12
Difference From Top Quartile (%)	-27.96	-25.95	-21.99	-24.38	-25.66	-24.03	-26.11	-27.15	-21.54	-21.01	-25.15	-21.20	-28.25	-29.72	-28.78	-26.97	-27.52	-29.78	-30.92	-29.54
1 to 3 Years College																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
College Participants	156	194	197	233	192	208	193	239	245	262	299	289	323	360	299	284	304	289	315	241
1 to 3 Years Rate(%)	7.33	8.58	8.33	9.88	8.11	8.26	7.29	8.95	9.03	9.49	10.11	9.19	10.01	11.02	9.37	8.95	9.75	9.54	10.41	8.45
Difference From Top Quartile (%)	-2.33	-0.47	-2.68	-1.12	-1.72	-1.41	-3.33	-0.92	-1.20	-0.05	+1.34	-0.52	+1.79	+1.70	-0.06	-2.14	-2.02	-0.81	+1.62	+0.26
4 Years or More College																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
College Participants	47	44	49	49	51	44	75	63	51	71	60	68	85	67	85	76	60	34	54	58
4 Years + Rate(%)	2.19	1.96	2.09	2.09	2.17	1.76	2.82	2.36	1.87	2.58	2.02	2.16	2.63	2.04	2.67	2.39	1.94	1.11	1.80	2.04
Difference From Top Quartile (%)	-2.87	-3.27	-3.43	-2.57	-2.76	-3.68	-2.28	-2.37	-3.05	-1.69	-2.33	-3.85	-3.90	-4.19	-3.99	-5.71	-5.72	-4.37	-5.88	-4.35

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Second Quartile																				
Enrolled in College																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	314	3034	3021	2855
College Participants	971	1004	1032	936	941	1069	1122	1101	1064	1120	1204	1260	1269	1231	1294	1233	1240	1318	1324	1204
Enrolled Rate(%)	45.68	44.50	43.55	39.77	39.80	42.50	42.32	41.27	39.21	40.57	40.69	40.10	39.37	37.64	40.49	38.90	39.83	43.44	43.85	42.18
Difference From Top Quartile (%)	-18.60	-17.79	-13.50	-16.21	-19.51	-17.55	-18.29	-20.53	-16.50	-12.93	-14.44	-12.77	-18.33	-20.58	-15.82	-17.50	-18.03	-18.84	-19.11	-21.48
1 to 3 Years College																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
College Participants	161	190	478	231	226	221	283	239	270	235	276	302	331	364	326	313	349	345	304	297
1 to 3 Years Rate(%)	7.58	8.41	9.92	9.82	9.55	8.80	10.66	8.97	9.96	8.49	9.33	9.62	10.26	11.12	10.19	9.88	11.21	11.37	10.07	10.40
Difference From Top Quartile (%)	-2.08	-0.64	-1.09	-1.18	-0.28	-0.87	-0.04	-0.90	-0.27	-1.05	+0.56	-0.09	+2.04	+1.80	+0.76	-1.21	-0.56	+1.02	+1.28	+2.21
4 Years or More College																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
College Participants	82	82	62	96	73	61	90	89	74	93	98	109	91	117	108	126	103	101	103	109
4 Years + Rate(%)	2.92	3.65	2.62	4.05	3.10	2.43	3.39	3.33	2.72	3.36	3.30	3.46	2.81	3.58	3.37	3.98	3.30	3.34	3.41	3.82
Difference From Top Quartile (%)	-2.14	-1.58	-2.90	-0.61	-1.83	-3.01	-1.71	-1.40	-2.20	-0.91	-1.05	-2.55	-3.72	-2.65	-3.29	-4.12	-4.36	-2.14	-4.27	-2.57
Third Quartile																				
Enrolled in College																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
College Participants	1085	1139	1199	1167	1053	1251	1369	1265	1288	1322	1491	1620	1531	1586	1636	1614	1566	1588	1609	1474
Enrolled Rate(%)	51.08	50.46	50.61	49.57	44.56	49.73	51.66	47.40	47.47	47.89	50.38	51.58	47.51	48.50	51.18	50.91	50.28	52.35	53.27	51.63
Difference From Top Quartile (%)	-13.20	-11.83	-6.44	-6.41	-14.75	-10.32	-8.95	-14.40	-8.24	-5.61	-4.75	-1.29	-10.19	-9.72	-4.40	-5.49	-7.58	-9.93	-9.69	-12.03
1 to 3 Years College																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
College Participants	204	195	237	243	237	230	269	252	262	250	256	300	323	311	300	350	310	267	317	285
1 to 3 Years Rate(%)	9.60	8.66	9.99	10.33	10.05	9.15	9.10	9.43	9.65	9.07	8.66	9.58	10.01	9.51	9.37	11.06	9.95	8.82	10.48	9.98
Difference From Top Quartile (%)	-0.06	-0.39	-1.02	-0.67	-0.22	-0.52	-1.52	-0.44	-0.58	-0.47	-0.11	-0.13	+1.79	+0.19	-0.06	-0.03	-1.82	-1.53	+1.69	+1.79
4 Years or More College																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
College Participants	71	75	91	108	129	105	98	95	132	113	129	181	148	157	173	148	148	185	162	168
4 Years + Rate(%)	3.33	3.31	3.83	4.57	5.45	4.17	3.71	3.56	4.86	4.10	4.35	5.75	4.60	4.78	5.42	4.66	4.76	6.08	5.36	5.87
Difference From Top Quartile (%)	-1.73	-1.92	-1.69	-0.09	+0.52	-1.27	-1.39	-1.17	-0.06	-0.17	-0.37	-0.26	-1.93	-1.45	-1.24	-3.44	-2.90	+0.60	-2.32	-0.52

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Top Quartile																				
Enrolled in College																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
College Participants	1366	1405	1352	1318	1401	1510	1607	1649	1512	1477	1631	1661	1860	1904	1799	1788	1802	1890	1902	1818
Enrolled Rate(%)	64.28	62.29	57.05	55.98	59.31	60.05	60.61	61.80	55.71	53.50	55.13	52.87	57.70	58.22	56.31	56.40	57.86	62.28	62.96	63.66
1 to 3 Years College																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
College Participants	205	204	261	259	232	243	281	263	278	263	259	305	265	305	301	352	366	314	266	234
1 to 3 Years Rate(%)	9.66	9.05	11.01	11.00	9.83	9.67	10.62	9.87	10.23	9.54	8.77	9.71	8.22	9.32	9.43	11.09	11.77	10.35	8.79	8.19
4 Years or More College																				
High School Graduates	2125	2256	2369	2355	2363	2515	2651	2669	2714	2761	2960	3141	3223	3271	3196	3170	3114	3034	3021	2855
College Participants	108	118	131	110	117	137	135	126	134	118	140	189	210	204	213	257	239	166	232	182
4 Years + Rate(%)	5.08	5.23	5.52	4.66	4.93	5.44	5.10	4.73	4.92	4.72	4.35	6.01	6.53	6.23	6.66	8.10	7.66	5.48	7.68	6.39

Source: Current Population Survey, Series P-20.

TABLE 27
College Enrollment By Institutional Control for Unmarried High School Graduates
Age 18 to 24 by Family Income
1971 to 1979, 1981 to 1986, 1989

(Numbers in thousands)

Total	1971	1972	1973	1974	1975	1976	1977	1978	1979	1981	1982	1983	1984	1985	1986	1989
College Enrollment	4368	4414	4165	4140	4751	5012	4940	4791	4816	5536	5609	5654	5609	5567	5552	5469
Public College Enrollment	3369	3355	3136	3134	3693	3878	3802	3544	3652	4104	4265	4272	4437	4292	4218	4305
Public Share	77.13	76.01	75.29	75.70	77.73	77.37	76.96	73.97	75.83	74.13	76.04	75.56	79.11	77.10	75.97	78.72
Private College Enrollment	999	1059	1030	1005	1058	1132	1138	1247	1163	1430	1344	1383	1172	1274	1334	1164
Private Share	22.87	23.99	24.73	24.28	22.27	22.59	23.04	26.03	24.15	25.83	23.96	24.46	20.89	22.88	24.03	21.28
Family Income Quartiles																
Bottom Quartile																
College Enrollment	820	831	744	795	921	914	925	927	897	995	949	932	880	933	945	947
Public College Enrollment	666	696	600	664	750	764	783	730	717	820	779	731	748	769	766	800
Public Share	81.25	83.79	80.59	83.54	81.44	83.57	84.63	78.71	79.89	82.48	82.06	78.38	84.97	82.49	81.05	82.12
Difference From Top Quartile (%)	+9.46	+14.03	+9.72	+13.92	+8.15	+10.67	+14.98	+8.78	+5.43	+12.68	+9.69	+5.88	+7.63	+10.19	+9.84	+8.03
Private College Enrollment	154	135	144	130	171	150	142	197	180	174	170	202	132	163	179	174
Private Share	18.75	16.21	19.41	16.46	18.56	16.43	15.37	21.29	20.11	17.52	17.94	21.62	15.03	17.51	18.95	17.88
Difference From Top Quartile (%)	-9.46	-14.03	-9.72	-13.92	-8.15	-10.67	-14.98	-8.78	-5.43	-12.68	-9.69	-5.88	-7.63	-10.19	-9.84	-8.03
Second Quartile																
College Enrollment	1004	1032	936	941	1069	1122	1101	1064	1120	1260	1269	1231	1294	1233	1240	1203
Public College Enrollment	810	816	743	734	851	882	895	810	863	981	993	972	1020	990	977	960
Public Share	80.64	79.04	79.32	78.03	79.60	78.67	81.25	76.15	77.13	77.92	78.25	78.97	78.83	80.25	78.83	79.78
Difference From Top Quartile (%)	+8.85	+9.28	+8.45	+8.41	+6.31	+5.77	+11.60	+6.22	+2.67	+8.12	+5.88	+6.47	+1.49	+7.95	+7.62	+5.69
Private College Enrollment	194	216	194	207	218	239	206	254	256	278	276	259	274	243	262	243
Private Share	19.36	20.96	20.68	21.97	20.40	21.33	18.75	23.85	22.87	22.06	21.75	21.03	21.17	19.75	21.17	20.22
Difference From Top Quartile (%)	-8.85	-9.28	-8.45	-8.41	-6.31	-5.77	-11.60	-6.22	-2.67	+8.14	-5.88	-6.47	-1.49	-7.95	-7.62	-5.69

Total	1971	1972	1973	1974	1975	1976	1977	1978	1979	1981	1982	1983	1984	1985	1986	1989
Third Quartile																
College Enrollment	1139	1199	1167	1003	[illegible]	1369	1265	1288	1322	1620	1531	1586	1636	1614	1566	1474
Public College Enrollment	884	900	859	760	985	1061	975	947	972	1144	1148	1188	1277	1241	1192	1198
Public Share	77.65	75.03	73.61	75.79	78.77	77.51	77.09	73.51	73.51	70.61	74.93	74.92	78.07	76.89	76.13	81.30
Difference From Top Quartile (%)	+5.86	+5.27	+2.74	+6.17	+5.48	+4.61	+7.44	+3.58	-0.95	+0.81	+2.56	+2.42	+0.73	+4.59	+4.92	+7.21
Private College Enrollment	254	299	308	243	266	308	290	341	350	476	384	398	359	373	374	276
Private Share	22.35	24.97	26.39	24.21	21.23	22.49	22.91	26.49	26.49	29.39	25.07	25.08	21.93	23.11	23.87	18.70
Difference From Top Quartile (%)	-5.86	-5.27	-2.74	-6.17	-5.48	-4.61	-7.44	-3.58	+0.95	-0.81	-2.56	-2.42	-0.73	-4.59	-4.92	-7.21
Top Quartile																
College Enrollment	1405	1352	1318	1401	1510	1607	1649	1512	1477	1661	1860	1904	1800	1788	1802	1818
Public College Enrollment	1009	943	934	976	1107	1171	1149	1057	1100	1159	1346	1381	1392	1292	1283	1347
Public Share	71.79	69.76	70.87	69.62	73.29	72.90	69.65	69.93	74.46	69.80	72.37	72.50	77.34	72.30	71.21	74.09
Private College Enrollment	396	409	384	426	403	435	501	455	377	501	514	524	408	495	519	471
Private Share	28.21	30.24	29.13	30.38	26.71	27.10	30.35	30.07	25.54	30.20	27.63	27.50	22.66	27.70	28.79	25.91

Source: Current Population Survey, Series P-20.

TABLE 28
College Enrollment By Status for Unmarried High School Graduates
Age 18 to 24 By Family Income
1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total Population	4194	4368	4414	4165	4140	4751	5012	4940	4791	4816	5214	5536	5609	5654	5609	5567	5552	5778	5807	5469
Full Time	3839	3983	4024	3814	3694	4241	4441	4324	4235	4285	4548	4860	4856	4919	4894	4841	4832	4937	5018	4745
Full Time Share(%)	91.54	91.19	91.16	91.57	89.23	89.27	88.61	87.53	88.39	88.97	87.23	87.79	86.58	87.00	87.25	86.96	87.03	85.44	86.41	86.76
Part Time	355	385	389	352	447	510	572	617	557	532	666	675	761	734	715	725	720	841	789	724
Part Time Share(%)	8.46	8.81	8.81	8.45	10.80	10.73	11.41	12.49	11.63	11.05	12.77	12.19	13.57	12.98	12.75	13.02	12.97	14.56	13.59	13.24
Family Income Quartiles																				
Bottom Quartile																				
Population	772	820	831	744	795	921	914	925	927	897	887	995	949	932	880	933	945	986	968	974
Full Time	706	767	756	676	687	807	804	809	814	800	776	858	799	795	748	780	780	810	821	815
Full Time Share(%)	91.43	93.53	91.00	90.84	86.42	87.64	87.91	87.45	87.75	89.13	87.46	86.24	84.16	85.28	84.99	83.67	82.51	82.12	84.85	83.66
Part Time	66	53	75	68	108	114	111	116	114	98	111	137	158	137	132	152	165	176	147	159
Part Time Share(%)	8.57	6.47	9.00	9.16	13.58	12.36	12.09	12.55	12.25	10.87	12.54	13.76	15.84	14.72	15.01	16.33	17.49	17.88	15.15	16.34
Second Quartile																				
Population	971	1004	1032	936	941	1069	1122	1101	1064	1120	1204	1260	1269	1231	1294	1233	1240	1317	1325	1203
Full Time	868	904	937	850	841	936	976	951	936	978	1020	1090	1097	1070	1115	1064	1059	1097	1138	1028
Full Time Share(%)	89.43	90.07	90.79	90.79	89.42	87.56	86.99	86.33	87.94	87.36	84.68	86.54	86.42	86.90	86.19	86.27	85.41	83.31	85.86	85.47
Part Time	103	100	95	86	100	133	146	151	128	142	185	169	172	161	179	169	181	220	187	175
Part Time Share(%)	10.57	9.93	9.21	9.21	10.58	12.44	13.01	13.67	12.06	12.64	15.32	13.46	13.58	13.10	13.81	13.73	14.59	16.69	14.14	14.53

Total	**1970**	**1971**	**1972**	**1973**	**1974**	**1975**	**1976**	**1977**	**1978**	**1979**	**1980**	**1981**	**1982**	**1983**	**1984**	**1985**	**1986**	**1987**	**1988**	**1989**
Third Quartile																				
Population	1085	1139	1199	1167	1003	1251	1369	1265	1288	1322	1491	1620	1531	1586	1636	1614	1566	1585	1610	1474
Full Time	982	1018	1091	1071	893	1123	1210	1098	1144	1182	1309	1434	1315	1384	1438	1399	1384	1366	1373	1283
Full Time Share(%)	90.48	89.43	91.02	91.77	89.02	89.78	88.38	86.78	88.84	89.43	87.82	88.54	85.88	87.25	87.94	86.71	88.39	86.17	85.30	87.04
Part Time	103	120	108	96	110	128	159	167	144	140	182	186	216	202	197	214	528	219	237	191
Part Time Share(%)	9.52	10.57	8.98	8.23	10.98	10.22	11.62	13.22	11.16	10.57	12.18	11.46	14.12	12.75	12.06	13.29	11.61	13.83	14.70	12.96
Top Quartile																				
Population	1366	1405	1352	1318	1401	1510	1607	1649	1512	1477	1631	1661	1860	1904	1800	1788	1801	1890	1905	1818
Full Time	1283	1293	1240	1217	1273	1375	1451	1466	1340	1325	1443	1478	1645	1670	1593	1598	1610	1664	1686	1619
Full Time Share(%)	93.93	92.04	91.74	92.30	90.84	91.03	90.32	88.89	88.66	89.70	88.44	88.98	88.43	87.70	88.50	89.37	89.34	88.05	88.53	89.05
Part Time	83	112	112	102	128	135	155	183	171	152	189	183	215	234	207	190	192	226	218	199
Part Time Share(%)	6.07	7.96	8.26	7.70	9.16	8.97	9.68	11.11	11.34	10.30	11.56	11.02	11.57	12.30	11.50	10.63	10.66	11.95	11.47	10.95

Source: Current Population Survey, Series P-20.

TABLE 29
Family Income Quartiles for Married (Spouse Present) High School Graduates Age 18 to 24
1970 to 1989

	Bottom	Second	Third
1989	$13,253	$22,430	$31,971
1988	12,661	20,740	29,872
1987	12,560	19,562	28,611
1986	12,227	19,064	28,157
1985	12,210	18,890	27,815
1984	11,362	17,291	25,859
1983	11,014	16,744	24,506
1982	11,018	16,721	23,992
1981	10,352	15,121	21,998
1980	9,815	14,452	20,411
1979	9,237	13,603	18,867
1978	8,522	12,757	17,539
1977	7,641	11,652	15,635
1976	6,928	10,496	14,197
1975	6,703	9,919	13,708
1974	6,548	9,620	13,261
1973	5,930	8,756	12,429
1972	5,274	7,843	11,371
1971	5,180	7,569	10,454
1970	5,185	7,293	9,784

TABLE 30
College Participation Rates for All Married (Spouse Present) High School Graduates
Age 18 to 24 By Family Income
1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
High School Graduates	6472	6736	6796	7153	7153	6828	6390	6234	6015	5815	5841	5877	5587	5388	5045	4877	4616	4331	3823	3804
College Participants	2376	2611	2621	2587	2630	2483	2378	2147	2064	2024	2013	2068	2003	1862	1758	1718	1694	1614	1473	1597
Participation Rate(%)	36.71	38.76	38.57	36.17	36.77	36.36	37.21	34.44	34.31	34.81	34.46	35.19	35.85	34.56	34.85	35.23	36.70	37.27	38.53	41.98
Family Income Quartiles																				
Bottom Quartile																				
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1347	1261	1219	1154	1083	956	951
College Participants	658	685	628	599	629	575	557	511	405	477	442	472	446	373	362	343	325	283	254	337
Participation Rate(%)	40.69	40.69	36.96	33.47	35.18	33.71	34.87	32.77	26.95	32.78	30.28	32.16	31.93	27.67	28.69	28.14	28.16	26.17	26.62	35.48
Difference From Top Quartile (%)	-0.94	-2.90	-10.83	-9.04	-8.38	-11.20	-11.42	-9.73	-15.62	-11.57	-16.11	-13.26	-12.31	-20.16	-18.50	-17.81	-20.59	-26.69	-25.57	-18.80
Second Quartile																				
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1347	1261	1219	1154	1083	956	951
College Participants	483	523	527	579	582	543	521	482	476	438	412	425	448	399	383	348	353	327	299	356
Participation Rate(%)	29.56	31.07	31.01	32.35	32.53	31.80	32.62	30.95	31.68	30.13	28.19	28.90	32.07	29.63	30.39	28.55	30.57	30.24	31.29	37.39
Difference From Top Quartile (%)	-12.07	-12.52	-16.78	-10.16	-11.03	-13.11	-13.67	-11.55	-10.89	-14.22	-18.20	-16.52	-12.17	-18.20	-16.79	-17.40	-18.18	-22.62	-20.90	-16.89
Third Quartile																				
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1347	1261	1219	1154	1083	956	951
College Participants	561	669	654	650	640	598	560	492	542	465	482	504	491	446	418	467	454	431	421	388
Participation Rate(%)	34.67	39.70	38.50	36.33	35.80	35.03	35.08	31.55	36.05	31.97	32.98	34.27	35.16	33.10	33.13	38.26	39.32	39.80	44.02	40.78
Difference From Top Quartile (%)	-6.96	-3.89	-9.29	-6.18	-7.76	-9.88	-11.21	-10.95	-6.52	-12.38	-13.41	-11.15	-9.08	-14.73	-14.05	-7.69	-9.43	-13.06	-8.17	-13.50
Top Quartile																				
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1347	1261	1219	1154	1083	956	951
College Participants	674	734	812	760	779	767	740	662	640	645	677	667	618	644	595	560	563	572	499	516
Participation Rate(%)	41.63	43.59	47.79	42.51	43.56	44.91	46.29	42.50	42.57	44.35	46.39	45.42	44.24	47.83	47.18	45.95	48.75	52.86	52.19	54.28

Source: Current Population Survey, Series P-20.

TABLE 31
Male College Participation Rates for Married (Spouse Present) High School Graduates Age 18 to 24 By Family Income 1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
High School Graduates	2391	2545	2549	2745	2738	2597	2338	2331	2248	2205	2161	2128	2027	1844	1744	1660	1641	1549	1244	1265
College Participants	1089	1212	1209	1170	1173	1083	959	860	817	828	733	774	747	612	634	590	594	538	487	542
Participation Rate(%)	45.55	47.62	47.43	42.62	42.84	41.70	41.02	36.89	36.34	37.55	33.92	36.37	36.85	33.19	36.35	35.54	36.20	34.73	39.15	42.85
Family Income Quartiles																				
Bottom Quartile																				
High School Graduates	667	706	750	766	747	734	650	628	601	631	590	585	568	490	477	464	458	447	345	353
College Participants	337	353	345	300	306	298	253	226	186	229	183	208	197	147	159	139	129	113	103	134
Participation Rate(%)	50.49	50.07	45.97	39.10	41.02	40.62	38.93	35.98	30.95	36.30	31.00	35.62	34.60	29.94	33.36	30.01	28.17	25.33	29.76	38.07
Difference From Top Quartile (%)	+0.99	-0.56	-11.13	-10.45	-10.00	-10.12	-11.19	-9.07	-11.84	-6.67	-17.77	-11.54	-7.13	-14.27	-16.15	-13.40	-21.35	-26.38	-22.51	-16.51
Second Quartile																				
High School Graduates	618	661	645	717	697	668	606	610	591	550	566	546	504	484	454	426	418	404	320	303
College Participants	227	260	258	278	265	248	223	207	203	189	153	165	172	143	128	140	129	107	102	111
Participation Rate(%)	36.70	39.30	39.94	38.76	38.01	37.05	36.88	33.90	34.38	34.35	27.00	30.19	34.12	29.63	28.26	32.81	30.88	26.45	31.81	36.74
Difference From Top Quartile (%)	-12.80	-11.33	-17.16	-10.79	-13.01	-13.69	-13.24	-11.15	-8.41	-8.62	-21.77	-16.97	-7.61	-14.58	-21.25	-10.60	-18.64	-25.26	-20.46	-17.84
Third Quartile																				
High School Graduates	588	630	593	662	665	615	557	595	564	507	549	527	505	476	402	393	422	381	299	315
College Participants	269	321	286	295	281	243	219	203	217	188	175	179	191	148	143	147	166	154	136	136
Participation Rate(%)	45.75	51.01	36.10	44.60	42.21	39.51	39.36	34.09	38.52	37.05	31.86	34.00	37.76	31.13	35.61	37.48	39.38	40.43	45.50	43.15
Difference From Top Quartile (%)	-3.75	+0.38	-21.00	-4.95	-8.81	-11.23	-10.76	-10.96	-4.27	-5.92	-16.91	-13.16	-3.97	-13.08	-13.90	-5.93	-10.14	-11.28	-6.77	-11.43
Top Quartile																				
High School Graduates	518	548	561	599	629	580	526	498	492	518	456	470	450	393	411	377	342	317	281	294
College Participants	256	277	320	297	321	294	264	224	211	222	222	221	188	174	203	164	170	164	147	160
Participation Rate(%)	49.50	50.63	57.10	49.55	51.02	50.74	50.12	45.05	42.79	42.97	48.77	47.16	41.73	44.21	49.51	43.41	49.52	51.71	52.27	54.58

Source: Current Population Survey, Series P-20.

TABLE 32
Female College Participation Rates for Married (Spouse Present) High School Graduates Age 18 to 24 By Family Income 1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
High School Graduates	4081	4191	4247	4408	4415	4231	4052	3903	3767	3610	3680	3749	3560	3544	3301	3217	2975	2782	2579	2539
College Participants	1287	1399	1412	1417	1457	1400	1419	1287	1247	1196	1280	1294	1256	1250	1124	1128	1100	1076	986	1055
Participation Rate(%)	31.54	33.38	33.25	32.15	33.00	33.09	35.02	32.97	33.10	33.13	34.78	34.52	35.28	35.27	34.05	35.06	36.97	38.68	38.23	41.55
Family Income Quartiles																				
Bottom Quartile																				
High School Graduates	951	978	949	1022	1041	973	948	930	903	823	870	885	829	857	784	755	696	635	611	598
College Participants	321	332	283	299	323	277	304	284	219	248	259	264	250	226	203	204	196	170	152	203
Participation Rate(%)	33.81	33.91	29.84	29.26	31.00	28.50	32.08	30.60	24.30	30.09	29.80	29.87	30.11	36.38	25.83	27.00	28.15	26.76	24.85	33.95
Difference From Top Quartile (%)	-4.12	-6.28	-13.36	-9.70	-8.52	-13.41	-12.33	-10.69	-18.17	-12.95	-15.51	-14.73	-15.32	-12.95	-20.23	-20.09	-20.28	-26.57	-27.31	-20.19
Second Quartile																				
High School Graduates	1000	1022	1054	1071	1092	1039	992	949	912	903	894	923	893	862	807	794	736	679	636	647
College Participants	256	263	269	301	317	295	298	276	273	249	259	260	276	256	255	208	224	221	197	244
Participation Rate(%)	25.63	25.75	25.54	28.06	29.04	28.42	30.01	29.05	29.93	27.55	28.95	28.13	30.92	26.58	31.59	26.99	30.39	32.49	31.03	37.72
Difference From Top Quartile (%)	-12.30	-14.44	-17.66	-10.90	-10.48	-13.49	-14.40	-12.24	-12.54	-15.49	-16.36	-16.47	-14.51	-22.75	-14.47	-20.10	-18.04	-20.84	-21.13	-16.42
Third Quartile																				
High School Graduates	1030	1054	1106	1126	1123	1093	1041	963	940	902	911	942	892	871	860	826	732	702	657	637
College Participants	292	347	368	354	360	355	341	289	325	277	307	324	300	298	275	319	288	277	285	252
Participation Rate(%)	28.34	32.95	33.27	31.46	32.00	32.51	32.79	29.98	34.56	30.71	33.66	34.43	33.68	34.17	31.97	38.64	39.28	39.46	43.35	39.58
Difference From Top Quartile (%)	-9.59	-7.24	-9.93	-7.50	-7.52	-9.40	-11.62	-11.31	-7.91	-12.33	-11.65	-10.17	-11.75	-15.16	-14.09	-8.45	-9.15	-13.87	-8.81	-14.56
Top Quartile																				
High School Graduates	1100	1136	1138	1189	1159	1127	1072	1060	1012	981	1004	1000	946	954	850	842	812	766	675	657
College Participants	417	457	492	463	458	472	476	438	430	422	455	446	430	471	392	397	393	408	352	356
Participation Rate	37.93	40.19	43.20	38.96	39.52	41.91	44.41	41.29	42.47	43.04	45.31	44.60	45.43	49.33	46.06	47.09	48.43	53.33	52.16	54.14

Source: Current Population Survey, Series P-20.

TABLE 33
White College Participation Rates for Married (Spouse Present) High School Graduates Age 18 to 24 By Family Income
1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
High School Graduates	5958	6182	6212	6518	6486	6205	5904	5713	5553	5316	5378	5413	5048	4961	4544	4323	4115	3854	3411	3401
College Participants	2248	2451	2430	2372	2390	2229	2193	1976	1908	1831	1827	1876	1799	1714	1545	1517	1491	1426	1292	1430
Participation Rate(%)	37.73	39.65	39.12	36.39	36.85	35.92	37.14	34.59	34.36	34.44	33.97	34.66	35.64	34.55	34.00	35.09	36.23	37.00	37.88	42.05
Family Income Quartiles																				
Bottom Quartile																				
High School Graduates	1441	1509	1486	1568	1564	1500	1438	1317	1313	1242	1275	1296	1166	1183	1066	1017	959	914	815	835
College Participants	622	650	574	547	546	495	508	444	369	407	388	418	374	333	279	287	263	234	200	293
Participation Rate(%)	43.20	43.09	38.60	34.91	34.88	33.13	35.32	33.73	28.07	32.76	30.40	32.22	32.08	28.16	26.17	28.20	27.38	25.61	24.59	35.07
Difference From Top Quartile(%)	+0.83	-0.90	-9.13	-7.03	-8.66	-11.77	-10.80	-8.38	-13.72	-10.09	-15.10	-12.64	-11.77	-19.62	-20.64	-17.49	-21.12	-27.46	-27.05	-19.36
Second Quartile																				
High School Graduates	1502	1546	1561	1620	1623	1511	1458	1440	1390	1363	1366	1373	1271	1241	1126	1080	1005	956	844	830
College Participants	460	499	487	527	531	463	472	446	435	401	372	385	407	360	336	299	291	275	256	308
Participation Rate(%)	30.66	32.27	31.17	32.54	32.70	30.65	32.39	30.97	31.28	29.42	27.22	28.03	32.01	29.02	29.88	27.66	28.91	28.73	30.40	37.17
Difference From Top Quartile(%)	-11.71	-11.72	-16.56	-9.40	-10.84	-14.25	-13.73	-11.14	-10.51	-13.43	-18.38	-16.83	-11.84	-18.76	-16.93	-18.03	-19.59	-24.34	-21.24	-17.26
Third Quartile																				
High School Graduates	1498	1571	1567	1660	1652	1599	1500	1481	1422	1356	1356	1370	1295	1266	1173	1110	1086	987	867	855
College Participants	522	618	607	597	597	554	517	465	508	442	438	457	441	413	378	422	421	388	378	349
Participation Rate(%)	34.86	39.31	38.74	35.97	36.11	34.68	34.50	31.37	35.71	32.63	32.29	33.37	34.06	32.64	32.20	37.98	38.81	39.31	43.60	40.82
Difference From Top Quartile(%)	-7.51	-4.68	-8.99	-5.97	-7.43	-10.22	-11.62	-10.74	-6.08	-10.22	-13.31	-11.49	-9.79	-15.14	-14.61	-7.71	-9.69	-13.76	-8.04	-13.61
Top Quartile																				
High School Graduates	1518	1556	1598	1670	1647	1595	1507	1475	1428	1356	1380	1375	1316	1272	1178	1116	1064	997	886	882
College Participants	643	684	763	700	717	716	695	621	597	581	629	617	577	608	552	510	516	529	457	480
Participation Rate(%)	42.37	43.99	47.73	41.94	43.54	44.90	46.12	42.11	41.79	42.85	45.60	44.86	43.85	47.78	46.81	45.69	48.50	53.07	51.64	54.43

Source: Current Population Survey, Series P-20.

TABLE 34
Black College Participation Rates for Married (Spouse Present) High School Graduates Age 18 to 24 By Family Income 1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
High School Graduates	451	489	541	567	569	529	421	454	396	397	372	376	436	315	370	431	373	367	333	318
College Participants	101	135	173	177	183	206	149	138	129	150	136	149	161	95	163	149	143	140	142	119
Participation Rate(%)	22.39	27.61	31.98	31.22	32.16	38.94	35.39	30.40	32.58	37.78	36.56	39.63	36.93	30.16	44.05	34.57	38.34	38.15	42.64	37.42
Family Income Quartiles																				
Bottom Quartile																				
High School Graduates	156	156	200	186	185	184	148	222	160	176	149	156	193	125	138	158	158	136	111	99
College Participants	27	30	49	50	52	66	46	60	30	57	39	43	54	21	62	40	48	36	21	38
Participation Rate(%)	17.60	19.16	24.30	27.05	28.25	35.74	31.28	26.89	18.60	32.59	26.17	27.88	28.07	17.04	44.97	25.55	30.36	26.68	19.22	38.48
Difference From Top Quartile (%)	-10.57	-17.20	-22.69	-11.74	-15.43	-9.56	-12.68	-22.11	-33.91	-16.01	-28.02	-24.95	-22.74	-17.24	-18.07	-22.42	-22.78	-24.34	-32.74	-2.86
Second Quartile																				
High School Graduates	105	131	127	153	142	168	127	105	100	69	73	80	96	84	107	110	120	97	94	101
College Participants	17	25	35	44	40	64	41	29	37	29	29	33	31	29	34	41	49	38	56	35
Participation Rate(%)	16.13	19.34	27.25	28.88	28.14	37.93	32.67	27.42	36.86	41.81	39.43	41.79	32.31	34.80	31.50	36.97	40.91	39.14	59.36	34.35
Difference From Top Quartile (%)	-12.04	-17.02	-19.74	-9.90	-15.54	-7.37	-11.29	-21.58	-15.65	-6.79	-14.76	-11.04	-18.50	+0.52	-31.54	-11.00	-12.23	-11.90	+7.40	-6.99
Third Quartile																				
High School Graduates	105	102	127	119	117	90	84	65	74	84	91	77	83	61	71	82	43	71	75	81
College Participants	33	43	49	40	36	37	34	19	30	31	36	39	43	29	33	29	18	34	38	31
Participation Rate(%)	31.08	42.49	38.42	33.82	30.89	42.22	40.35	29.71	40.46	36.55	39.68	60.80	52.15	47.47	46.88	35.72	42.65	47.38	49.68	38.15
Difference From Top Quartile (%)	+2.91	+6.13	-8.57	-4.97	-12.79	-3.08	-3.61	-19.29	-12.05	-12.05	-14.51	+7.97	+1.34	+13.19	-16.16	-12.25	-10.49	-3.64	-2.28	-3.19
Top Quartile																				
High School Graduates	85	100	87	109	125	87	62	61	62	68	60	63	64	45	54	80	52	63	53	37
College Participants	24	36	41	42	55	39	27	30	32	33	32	34	32	15	34	38	28	32	28	15
Participation Rate(%)	28.17	36.36	46.99	38.79	43.68	45.30	43.96	49.00	52.51	48.60	54.19	52.83	50.81	34.28	63.04	47.97	53.14	51.02	51.96	41.34

Source: Current Population Survey, Series P-20.

TABLE 35
Hispanic College Participation Rate for Married (Spouse Present) High School Graduates
Age 18 to 24 By Family Income
1972 to 1989

(Numbers in thousands)

Total	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
High School Graduates	265	260	307	248	262	290	316	286	259	328	319	284	282	350	349	375	324	360
College Participants	56	73	95	76	87	56	110	100	82	108	112	87	83	116	118	104	92	116
Participation Rate(%)	21.13	28.08	30.94	30.65	33.21	19.31	34.81	34.97	31.66	32.93	35.11	30.63	29.43	33.14	33.81	27.73	28.40	32.22
Family Income Quartiles																		
Bottom Quartile																		
High School Graduates	84	106	122	77	90	92	103	122	85	88	108	84	98	124	110	143	119	149
College Participants	16	22	34	30	32	25	29	45	22	31	35	18	26	36	42	29	24	48
Participation Rate(%)	19.58	20.92	27.71	39.15	35.37	27.19	27.92	36.52	26.33	35.09	32.73	21.37	26.31	29.24	37.89	20.37	20.22	32.27
Difference From Top Quartile (%)	-0.77	-15.09	-11.62	+7.96	-1.89	+5.56	-3.02	-7.57	-5.07	-2.41	-0.19	-14.37	+3.18	-5.20	-0.75	-28.08	-31.57	-18.08
Second Quartile																		
High School Graduates	79	69	91	60	78	69	97	66	66	82	74	59	71	91	82	88	87	76
College Participants	14	19	23	14	22	10	29	15	23	26	29	20	25	34	23	19	18	18
Participation Rate(%)	17.47	27.84	25.68	22.34	27.69	13.99	29.71	21.95	34.42	31.34	38.62	33.72	35.08	37.50	28.33	21.44	20.71	23.48
Difference From Top Quartile (%)	-2.88	-8.17	-13.65	-8.85	-9.57	-7.64	-28.41	-22.14	+3.02	-6.16	+5.70	-2.02	+11.95	+3.06	-10.31	-27.01	-31.08	-26.87
Third Quartile																		
High School Graduates	55	52	52	70	56	59	70	43	59	94	73	59	44	64	91	67	67	83
College Participants	16	20	21	20	19	6	26	17	21	28	27	20	16	21	28	19	24	24
Participation Rate(%)	29.35	38.08	40.92	28.13	34.67	10.58	36.57	38.95	34.74	29.18	36.98	33.56	37.26	33.10	30.33	27.82	35.28	28.65
Difference From Top Quartile (%)	+9.00	+2.07	+1.59	-3.06	-2.59	-11.05	-21.55	-5.14	+3.34	-8.32	+4.06	-2.18	+14.13	-1.34	-8.31	-20.63	-16.51	-21.70
Top Quartile																		
High School Graduates	47	33	43	41	38	70	46	54	49	64	64	82	69	71	66	77	51	52
College Participants	10	12	17	13	14	15	27	24	15	24	21	29	16	24	26	37	26	26
Participation Rate(%)	20.35	36.01	39.33	31.19	37.26	21.63	58.12	44.09	31.40	37.50	32.92	35.74	23.13	34.44	38.64	48.45	51.79	50.35

Source: Current Population Survey, Series P-20.

TABLE 38
College Participation Behaviors for All Married (Spouse Present) High School Graduates, Age 18 to 24 By Family Income
1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
High School Graduates	6472	6736	6796	7153	7153	6828	6390	6234	6015	5815	5841	5877	5587	5388	5045	4877	4616	4331	3823	3804
Enrolled in College	728	851	774	704	733	717	698	611	590	540	527	594	548	451	446	447	448	441	389	441
Enrollment Rate(%)	11.25	12.63	11.39	9.84	10.25	10.50	10.92	9.80	9.81	9.29	9.02	10.11	9.81	8.37	8.28	9.17	9.71	10.18	10.18	11.59
1-3 Years College	1042	1131	1240	1231	1256	1227	1108	1040	1055	1069	1042	1008	1002	958	955	877	923	816	746	816
Some College Rate(%)	16.10	16.79	18.25	17.21	17.56	17.97	17.34	16.68	17.54	18.83	17.84	17.15	17.93	17.78	18.93	17.98	20.00	18.84	19.51	21.45
4 Years College	606	629	607	652	641	539	572	496	419	415	444	466	453	453	357	394	323	357	338	357
Graduate Rate(%)	9.36	9.34	8.93	9.12	8.96	7.89	8.95	7.96	6.97	6.09	7.60	7.93	8.11	8.11	7.08	8.08	7.00	8.24	8.84	9.38
Bottom Quartile																				
Enrolled in College																				
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1374	1261	1219	1154	1083	956	951
College Participants	281	313	288	231	232	224	208	193	171	176	162	195	162	146	137	132	130	112	99	165
Enrolled Rate(%)	17.37	18.58	16.93	12.89	12.98	13.12	13.01	12.40	11.35	12.10	11.07	13.27	11.57	10.84	10.87	10.85	11.22	10.31	10.33	17.30
Difference From Top Quartile (%)	+8.05	+8.87	+6.53	+3.64	+3.42	+2.83	+1.64	+2.35	+1.50	+1.89	+1.04	+3.52	+1.51	+2.69	+1.37	+1.67	+2.16	-.29	-1.10	+4.24
1 to 3 Years College																				
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1374	1261	1219	1154	1083	956	951
College Participants	250	256	238	253	257	260	243	223	164	212	199	204	201	164	189	164	162	133	115	140
1 to 3 Years Rate(%)	15.43	15.22	13.99	14.14	14.38	15.24	15.22	14.31	10.91	14.53	13.63	13.88	14.38	12.20	14.96	13.46	14.01	12.31	12.00	14.71
Difference From Top Quartile (%)	-1.53	-4.07	-9.19	-5.51	-5.72	-6.92	-4.67	-6.07	-10.80	-8.71	-9.60	-8.26	-6.59	-11.38	-9.46	-9.36	-11.92	-12.14	-11.13	-8.90
4 Years or More College																				
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1374	1261	1219	1154	1083	956	951
College Participants	128	116	103	115	140	91	106	95	42	89	81	74	84	62	36	47	34	38	41	34
4 Years + Rate(%)	7.90	6.89	6.04	6.45	7.82	5.36	6.63	6.06	2.76	6.15	5.58	5.01	6.00	4.63	2.86	3.84	2.92	3.54	4.29	3.47
Difference From Top Quartile (%)	-7.45	-7.70	-8.18	-7.15	-6.08	-6.90	-8.40	-6.00	-8.25	-4.75	-7.55	-8.52	-7.41	-11.47	-10.41	-10.11	-10.85	-14.27	-13.34	-14.13

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Second Quartile																				
Enrolled in College																				
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1374	1261	1219	1154	1083	956	951
College Participants	136	184	153	162	177	166	163	147	137	111	111	122	126	105	106	104	112	101	80	118
Enrolled Rate(%)	8.44	10.94	9.02	9.05	9.89	9.72	10.18	9.41	9.08	7.60	7.61	8.27	9.03	7.79	8.38	8.49	9.72	9.34	8.36	12.37
Difference From Top Quartile (%)	-.88	+1.23	-1.38	-.20	+.33	-.77	-1.19	-.64	-.77	-2.61	-2.42	-1.48	-1.03	-.36	-1.12	-.69	+.66	-1.26	-3.07	-.69
1 to 3 Years College																				
High School Graduates	1618	1584	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1374	1261	1219	1154	1083	956	951
College Participants	246	244	285	299	298	274	253	235	264	254	225	215	246	216	224	182	196	169	185	174
1 to 3 Years Rate(%)	15.22	14.47	16.75	16.74	16.66	16.05	15.85	15.09	17.55	17.49	15.41	14.62	17.59	16.01	17.80	14.90	16.94	15.58	19.35	18.27
Difference From Top Quartile (%)	-1.74	-4.82	-6.43	-2.91	-3.44	-6.11	-4.04	-5.29	-4.16	-5.75	-7.82	-7.52	-3.18	-7.57	-6.62	-7.92	-8.99	-8.87	-3.78	-5.34
4 Years or More College																				
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1374	1261	1219	1154	1083	956	951
College Participants	100	95	89	118	107	103	105	100	105	73	76	88	76	79	53	63	45	58	34	64
4 Years + Rate(%)	6.20	5.66	5.24	6.57	5.98	6.03	6.59	6.44	6.97	5.04	5.17	6.01	5.44	5.83	4.22	5.15	3.91	5.32	3.57	6.75
Difference From Top Quartile (%)	-9.15	-8.93	-8.98	-7.03	-7.92	-6.23	-8.44	-5.62	-4.04	-5.86	-7.96	-7.52	-7.97	-10.27	-9.05	-8.80	-9.86	-12.49	-14.06	-10.85
Third Quartile																				
Enrolled in College																				
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1374	1261	1219	1154	1083	956	951
College Participants	160	190	156	146	153	148	146	114	135	105	108	134	120	90	83	99	102	113	101	104
Enrolled Rate(%)	9.86	11.31	9.20	8.18	8.56	8.67	9.13	7.34	8.95	7.23	7.37	9.13	8.57	6.70	6.62	8.14	8.82	10.48	10.59	10.89
Difference From Top Quartile (%)	+.54	+1.60	-1.20	-1.07	-1.00	-1.82	-2.24	-2.71	-.90	-2.98	-2.66	-.62	-1.49	-1.45	-2.88	-1.04	-.24	-.12	-.84	-2.17
1 to 3 Years College																				
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1374	1261	1219	1154	1083	956	951
College Participants	272	307	324	327	341	315	294	264	301	266	279	264	265	260	234	253	267	249	225	202
1 to 3 Years Rate(%)	16.80	18.22	19.07	18.31	19.10	18.43	18.40	16.95	19.98	18.28	19.09	17.97	19.01	19.34	18.55	20.74	23.10	23.03	23.57	21.23
Difference From Top Quartile (%)	-.16	-1.07	-4.11	-1.34	-1.00	-3.73	-1.49	-3.43	-1.73	-4.96	-4.14	-4.17	-1.76	-4.24	-5.87	-2.08	-2.83	-1.42	+.44	-2.38
4 Years or More College																				
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	1504	1454	1460	1469	1397	1374	1261	1219	1154	1083	956	951
College Participants	130	172	174	176	146	135	121	113	107	94	95	105	106	95	100	114	85	107	94	82
4 Years + Rate(%)	8.01	10.21	10.23	9.84	8.14	7.93	7.55	7.26	7.11	6.46	6.52	7.17	7.58	7.06	7.96	9.38	7.39	9.84	9.96	8.66
Difference From Top Quartile (%)	-7.34	-4.38	-3.99	-3.76	-5.76	-4.33	-7.48	-4.80	-3.90	-4.44	-6.61	-6.36	-5.83	-9.04	-5.31	-4.57	-6.38	-7.97	-7.77	-9.94

Total	1970	1971	1972	1973	1974	1975	1976	1977	197
Top Quartile									
Enrolled in College									
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	150
College Participants	151	163	177	165	171	179	182	157	14
Enrolled Rate(%)	9.32	9.71	10.40	9.25	9.56	10.49	11.37	10.05	9.8
1 to 3 Years College									
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	150
College Participants	274	325	394	351	359	378	318	318	32
1 to 3 Years Rate(%)	16.96	19.29	23.18	19.65	20.10	22.16	19.89	20.38	21.7
4 Years or More College									
High School Graduates	1618	1684	1699	1788	1788	1707	1598	1559	150
College Participants	248	246	242	243	249	209	240	188	16
4 Years + Rate(%)	15.35	14.59	14.22	13.60	13.90	12.26	15.03	12.06	11.0

Source: Current Population Survey, Series P-20.

1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
1504	1454	1460	1469	1397	1374	1261	1219	1154	1083	956	951
148	148	147	143	141	110	120	112	105	115	109	124
9.85	10.21	10.03	9.75	10.06	8.15	9.50	9.18	9.06	10.60	11.43	13.06
1504	1454	1460	1469	1397	1374	1261	1219	1154	1083	956	951
327	338	339	325	290	318	308	278	299	265	221	225
21.71	23.24	23.23	22.14	20.77	23.58	24.42	22.82	25.93	24.45	23.13	23.61
1504	1454	1460	1469	1397	1374	1261	1219	1154	1083	956	951
166	158	192	199	187	217	167	170	159	193	169	167
11.01	10.90	13.13	13.53	13.41	16.10	13.27	13.95	13.77	17.81	17.63	17.60

TABLE 37
College Enrollment By Institutional Control for Married High School Graduates Age 18 to 24 by Family Income
1971 to 1979, 1981 to 1986, 1989

(Numbers in thousands)

Total	1971	1972	1973	1974	1975	1976	1977	1978	1979	1981	1982	1983	1984	1985	1986	1989
College Enrollment	851	774	706	733	717	698	611	589	540	594	548	451	446	447	448	510
Public College Enrollment	703	643	569	607	600	528	496	481	431	488	455	358	366	365	356	419
Public Share	82.61	83.07	80.59	82.81	83.68	75.64	81.18	81.66	79.81	82.15	83.03	79.38	82.06	81.66	79.46	82.16
Private College Enrollment	148	131	137	126	117	170	115	108	109	106	93	93	80	82	92	91
Private Share	17.39	16.93	19.41	17.19	16.32	24.36	18.82	18.34	20.19	17.85	16.97	20.62	17.94	18.34	20.54	17.84
Family Income Quartiles																
Bottom Quartile																
College Enrollment	313	288	233	232	224	208	193	171	176	195	161	146	137	132	130	164
Public College Enrollment	262	237	186	196	190	152	151	133	136	151	122	109	110	109	94	139
Public Share	83.79	82.32	80.15	84.55	84.67	73.33	78.05	77.77	77.29	77.60	75.80	74.50	80.44	82.21	72.20	84.92
Difference From Top Quartile (%)	+7.97	+2.78	-0.48	+6.45	+1.84	+0.45	-6.97	-3.42	-0.59	-7.18	-8.11	-4.92	-2.68	+0.29	-13.05	+7.51
Private College Enrollment	51	51	46	36	34	55	42	38	40	44	39	37	27	24	36	25
Private Share	16.21	17.68	19.85	15.45	15.33	26.67	21.95	22.23	22.71	22.40	24.20	25.50	19.56	17.79	27.80	15.08
Difference From Top Quartile (%)	-7.97	-2.78	+0.48	-6.45	-1.84	-0.45	+6.97	+3.42	+0.59	+7.18	+8.11	+4.92	+2.68	-0.29	+13.05	-7.51

Total	1971	1972	1973	1974	1975	1976	1977	1978	1979	1981	1982	1983	1984	1985	1986	1989
Second Quartile																
College Enrollment	184	153	162	177	166	163	147	136	111	122	126	105	106	104	112	118
Public College Enrollment	161	135	132	147	137	126	115	113	90	99	110	87	89	87	94	93
Public Share	87.41	88.16	81.83	83.33	82.56	77.61	78.51	83.29	80.95	81.35	87.00	82.86	83.83	83.87	83.54	79.08
Difference From Top Quartile (%)	+11.59	+8.62	+1.20	+5.23	-0.27	+4.73	-6.51	+2.10	+3.07	-3.43	+3.09	+3.44	+0.71	+1.95	-1.71	+1.67
Private College Enrollment	23	18	29	29	29	36	32	23	21	23	16	18	17	17	18	25
Private Share	12.59	11.84	18.17	16.67	17.44	22.39	21.49	16.71	19.05	18.65	13.00	17.14	16.15	16.13	16.47	20.92
Difference From Top Quartile (%)	-11.59	-8.62	-1.20	-5.23	+0.27	-4.73	+6.51	-2.10	-3.07	+3.43	-3.09	-3.44	-0.73	-1.95	+1.72	-1.67
Third Quartile																
College Enrollment	190	156	146	153	148	146	114	134	109	134	120	90	83	99	102	104
Public College Enrollment	156	131	117	130	125	117	97	115	93	116	105	75	68	78	80	91
Public Share	81.86	83.48	79.89	84.83	84.48	80.20	84.62	85.50	85.34	86.71	87.54	83.19	80.95	78.31	78.29	86.94
Difference From Top Quartile (%)	+6.04	+3.94	-0.74	+6.73	+1.65	+7.32	-0.40	+4.31	+7.45	+1.93	+3.63	+3.77	-2.17	-3.61	-6.96	+9.53
Private College Enrollment	35	26	29	23	23	29	18	19	16	18	15	15	16	22	22	14
Private Share	18.14	16.52	20.11	15.17	15.52	19.80	15.38	14.50	14.66	13.29	12.46	16.81	19.05	21.69	21.70	13.06
Difference From Top Quartile (%)	-6.04	-3.94	+0.74	-6.73	-1.65	-7.32	+0.40	-4.31	+7.46	-1.93	-3.63	-4.48	+2.17	+3.61	+6.95	-9.53
Top Quartile																
College Enrollment	164	177	165	171	179	182	157	148	145	143	141	110	120	112	105	124
Public College Enrollment	124	141	133	133	148	132	133	120	113	121	118	87	100	92	89	96
Public Share	75.82	79.54	80.63	78.10	82.83	72.88	85.02	81.19	77.88	84.78	83.91	79.42	83.12	81.92	85.25	77.41
Private College Enrollment	40	36	32	37	31	49	23	28	32	22	23	23	20	20	15	28
Private Share	24.18	20.46	19.37	21.90	17.17	27.12	14.98	18.81	22.12	15.22	16.09	20.58	16.88	18.08	14.75	22.59

Source: Current Population Survey, Series P-20.

TABLE 38
College Enrollment By Status for Married (Spouse Present) High School Graduates Age 18 to 24 By Family Income
1970 to 1989

(Numbers in thousands)

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
College Enrollment	728	851	774	706	733	717	698	611	589	540	527	594	548	451	446	447	448	440	389	510
Full Time Enrollment	458	533	477	395	416	409	383	332	316	279	279	319	309	252	244	267	253	221	201	300
Full Time Share	62.91	62.63	61.63	55.95	56.75	57.04	54.87	54.34	53.65	51.67	52.94	53.70	56.39	55.88	54.71	59.73	56.47	50.23	51.67	58.82
Part Time Enrollment	270	318	297	311	317	308	305	279	273	261	248	275	239	199	202	180	195	219	188	210
Part Time Share	37.09	37.37	38.37	44.05	43.25	42.96	44.33	45.66	46.35	48.33	47.06	46.30	43.61	44.12	45.29	40.27	43.53	49.77	48.33	41.18
Family Income Quartiles																				
Bottom Quartile																				
College Enrollment	281	313	288	233	232	224	208	193	171	176	162	195	161	146	137	132	130	113	100	164
Full Time Enrollment	235	253	232	169	174	160	162	138	121	126	115	152	138	114	99	106	96	87	81	129
Full Time Share	83.72	80.86	80.76	72.50	75.16	71.40	77.75	71.51	70.72	71.38	71.18	77.80	85.27	77.76	72.35	80.39	74.16	77.20	81.63	78.67
Part Time Enrollment	46	60	55	64	58	64	46	55	50	50	47	43	24	32	38	26	33	26	18	35
Part Time Share	16.28	19.14	19.24	27.50	24.84	28.00	22.25	28.49	29.28	28.62	28.82	22.20	14.73	22.24	27.65	19.61	25.84	22.80	18.37	21.33
Second Quartile																				
College Enrollment	137	184	153	162	177	166	163	147	136	111	111	122	126	105	106	104	112	101	80	118
Full Time Enrollment	83	106	93	97	108	104	102	91	79	62	63	63	69	62	64	67	80	59	58	74
Full Time Share	60.49	57.47	60.86	59.71	61.11	62.40	62.89	62.26	58.41	55.80	57.09	55.23	54.22	58.74	63.31	65.16	71.34	58.91	72.36	62.47
Part Time Enrollment	54	78	60	65	69	62	60	55	57	49	48	58	58	43	42	36	32	41	22	44
Part Time Share	39.51	42.53	39.14	40.30	38.89	37.60	37.11	37.74	41.59	44.20	42.91	47.77	45.78	41.26	39.69	34.84	28.66	41.09	27.64	37.53

Total	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Third Quartile																				
College Enrollment	160	190	156	146	153	148	146	114	134	109	108	134	120	90	83	99	102	112	100	104
Full Time Enrollment	77	105	79	66	70	68	67	48	64	45	52	58	52	39	40	47	40	42	37	53
Full Time Share	48.02	55.09	50.55	45.06	45.84	45.84	45.69	41.70	47.46	41.93	48.16	43.50	43.44	43.23	48.09	47.51	39.60	37.93	37.26	51.10
Part Time Enrollment	83	85	77	80	83	80	79	67	70	63	56	76	68	51	43	52	127	69	63	51
Part Time Share	51.98	44.91	49.45	54.94	54.16	54.16	54.31	58.30	52.54	58.07	51.84	56.50	56.56	56.77	51.91	52.49	61.50	62.07	62.74	48.90
Top Quartile																				
College Enrollment	151	164	177	165	171	179	182	157	148	145	147	143	141	110	120	112	105	114	109	124
Full Time Enrollment	63	69	72	64	63	78	52	55	52	46	49	45	51	38	41	46	37	32	25	44
Part Time Share	42.09	42.36	40.95	38.65	37.01	43.40	28.88	34.98	35.21	31.88	33.18	31.70	36.19	34.42	34.21	41.14	35.05	27.88	22.45	35.66
Part Time Enrollment	87	94	104	102	108	101	129	102	96	99	98	98	90	72	79	66	68	82	85	80
Part Time Share	57.91	57.64	59.05	61.35	62.99	56.60	71.12	65.02	64.79	68.12	66.82	68.30	63.81	65.58	65.79	58.86	64.95	72.12	77.55	64.34

Source: Current Population Survey, Series P-20.

TABLE 39
Chances for College Degree By Family Income Quartiles for Unmarried 18 to 24 Year Old High School Graduates
1970 to 1989

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Bottom Quartile																				
H. S. Graduation Rate	.6162	.6192	.6361	.6429	.6338	.6412	.6412	.6322	.6439	.6383	.6483	.6372	.6312	.6408	.6581	.6672	.6686	.6587	.6421	.6499
College Partic. Rate	.4584	.4688	.4547	.4357	.4398	.4664	.4461	.4596	.4507	.4456	.4211	.4302	.4009	.4156	.3956	.4076	.4203	.4315	.4425	.4460
Chance for College	.282	.290	.289	.280	.278	.299	.286	.291	.290	.284	.273	.274	.253	.266	.260	.272	.281	.284	.284	.290
College Graduation Rate	.231	.207	.220	.220	.229	.186	.297	.249	.197	.272	.213	.228	.277	.215	.282	.252	.205	.117	.190	.215
Chance for Bachelor's	.065	.060	.064	.062	.064	.055	.085	.072	.057	.077	.058	.062	.070	.057	.073	.069	.057	.033	.054	.062
Second Quartile																				
H. S. Graduation Rate	.8380	.8158	.8345	.8425	.8062	.8103	.8393	.8150	.8211	.8087	.8167	.8156	.8252	.8058	.8245	.8260	.8133	.8258	.8378	.8171
College Partic. Rate	.5618	.5656	.5609	.5364	.5245	.5372	.5637	.5357	.5190	.5242	.5353	.5317	.5245	.5234	.5405	.5276	.5434	.5815	.5733	.5640
Chance for College	.471	.461	.468	.452	.423	.435	.473	.437	.426	.424	.437	.434	.433	.422	.446	.436	.442	.480	.480	.461
College Graduation Rate	.205	.257	.184	.285	.218	.171	.238	.234	.191	.236	.232	.243	.198	.252	.237	.280	.232	.235	.240	.269
Chance for Bachelor's	.097	.118	.086	.129	.092	.074	.113	.102	.081	.100	.101	.106	.086	.106	.106	.122	.103	.113	.115	.124
Third Quartile																				
H. S. Graduation Rate	.8974	.8822	.8799	.8965	.8867	.8999	.8877	.8857	.8894	.8938	.8949	.9039	.9008	.8904	.9070	.9028	.9032	.8881	.8956	.8824
College Partic. Rate	.6401	.6243	.6443	.6446	.6007	.6305	.6550	.6038	.6199	.6107	.6339	.6688	.6212	.6280	.6596	.6663	.6497	.6631	.6911	.6748
Chance for College	.574	.551	.567	.578	.533	.567	.581	.535	.551	.546	.567	.605	.560	.559	.598	.602	.587	.589	.619	.595
College Graduation Rate	.260	.259	.299	.357	.423	.326	.290	.278	.380	.320	.340	.449	.360	.374	.424	.364	.372	.475	.419	.459
Chance for Bachelor's	.149	.143	.170	.206	.227	.185	.168	.149	.209	.175	.193	.272	.201	.209	.253	.219	.218	.280	.259	.273
Top Quartile																				
H. S. Graduation Rate	.9308	.9273	.9274	.9243	.9286	.9331	.9354	.9415	.9236	.9222	.9186	.9134	.9350	.9279	.9345	.9428	.9331	.9473	.9420	.9315
College Partic. Rate	.7901	.7656	.7358	.7164	.7406	.7516	.7632	.7640	.7086	.6730	.6863	.6860	.7245	.7376	.7240	.7559	.7730	.7906	.7943	.7824
Chance for College	.735	.710	.682	.662	.688	.701	.714	.719	.654	.621	.630	.627	.677	.684	.677	.713	.721	.749	.748	.729
College Graduation Rate	.537	.555	.586	.494	.524	.578	.542	.502	.523	.501	.462	.638	.694	.662	.707	.850	.814	.582	.816	.679
Chance for Bachelor's	.395	.394	.400	.328	.360	.405	.387	.361	.342	.311	.291	.400	.470	.453	.479	.606	.587	.434	.610	.495

Sources: High School Graduation Rate From Table 2.
College Participation Rate From Table 19.
College Graduation Rate From 1980 High School and Beyond, NCES.

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